

***THE ACHIEVEMENT GAP IN MONTGOMERY COUNTY –  
A FY 2013 UPDATE***



**OFFICE OF LEGISLATIVE OVERSIGHT  
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A FY13 Update**

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## **Chapter I: Authority, Scope, and Organization of Report**

### **A. Authority**

Council Resolution 17-517, *FY 2013 Work Program for Office of Legislative Oversight*, adopted July 31, 2012.

### **B. Purpose and Scope**

The “achievement gap” refers to disparities in educational performance between higher- and lower-performing student groups, known as student subgroups. Typically, measures of the achievement gap in the United States compare performance differences between white, Asian, and higher income students and black, Latino, and lower income students. The gap can also refer to differences in student performance by English language proficiency and disability status.

Achievement gaps by race, ethnicity, and service group status are long-standing, national challenges. The achievement gap is also an emerging global challenge, given the lower ranking of U.S. students on international math and science comparisons.

In 2007, the County Council asked OLO to describe MCPS’ achievement gaps and report MCPS’ progress in narrowing these gaps since 2002. OLO Report 2008-2 examined differences between high- and low-performing MCPS students by race, ethnicity, and service group status including both grade level and above grade level performance measures. Between 2002 and 2007, OLO found:

- Progress narrowing the gaps was greater for grade level than for above grade level measures;
- Significant gaps persisted in rates of suspension, disability, and giftedness classification; and
- Some achievement gaps among subgroups had widened.

To understand MCPS’ progress in narrowing the achievement gap since 2007, this year the County Council asked OLO to update its 2008 report. Recently, Superintendent Joshua Starr has also requested a \$3.5 million increase in the FY14 operating budget to help narrow the achievement gap in the middle grades.<sup>1</sup>

To complete the current study, OLO and MCPS staff jointly identified the 11 measures reviewed in this report. To provide context for MCPS’ current performance, this report synthesizes the current research about the factors that correlate with the achievement gap, key policies at the federal, state, and local level aimed at closing the gap, and best practices for narrowing the achievement gap. A review of whether specific MCPS programs intended to narrow the achievement gap are effective was beyond the scope of this project.

The County Council also asked OLO to update another 2008 report that describes the performance of MCPS’ High School Consortia (OLO Report 2009-4). OLO’s examination of the achievement gaps among consortia and non-consortia MCPS high schools will be released as a separate memorandum report in 2013.

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<sup>1</sup> The Superintendent’s FY14 Operating Budget Request includes \$2.0 million for additional focus teachers and \$1.5 million for staff development teachers for middle schools aimed at narrowing the achievement gap. See <http://www.montgomeryschoolsmd.org/uploadedFiles/departments/budget/fy2014/budget-and-complement-full.pdf>

**Methodology:** OLO Senior Legislative Analyst Elaine Bonner-Tompkins prepared this report with assistance from Senior Legislative Analyst Sue Richards, Research Associate Carl Scruggs, and Administrative Specialist Kelli Robinson. OLO’s method for developing this report was to:

- Consult with key MCPS staff;
- Review the original OLO achievement gap report;
- Compile and analyze relevant performance data on student achievement among student subgroups by race, ethnicity, and service group status;
- Review federal, state, and local documents describing changes in policy drivers for addressing the achievement gap; and
- Synthesize the research literature on determinants of the achievement gap and best practices for narrowing the achievement gap.

## **C. Organization of the Report**

**Chapter II, Background,** describes in more detail what is meant by the term achievement gap, the factors that contribute to it, and other “gaps” in achievement relative to the performance of U.S. students in international comparisons and regarding 21<sup>st</sup> century skills.

**Chapter III, Methods for Reviewing Data,** provides an overview of OLO’s research methods to identify and analyze data for the 11 measures of achievement reviewed in this report.

**Chapter IV, Measures Where the Gap Narrowed,** describes MCPS’ progress in narrowing the achievement gap across five of the 11 measures reviewed: school readiness, proficiency on the Maryland School Assessments (MSAs), suspensions, academic ineligibility, and graduation.

**Chapter V, Measures Where Progress Was Mixed,** describes MCPS’ mixed progress in narrowing the achievement gap across two of the 11 measures reviewed: dropout rates, and completion of college and career readiness requirements.

**Chapter VI, Measures Where the Gap Widened,** describes four of 11 measures reviewed where MCPS’ achievement gap widened: advanced MSA performance, Algebra 1 completion by Grade 8 with C or higher, AP/IB performance, and SAT/ACT performance.

**Chapter VII, Policy Context,** describes key changes in federal, state, and local policies that impact MCPS’ efforts to narrow the achievement gap.

**Chapter VIII, Promising Practices,** synthesizes the research base to identify promising school and beyond school practices for narrowing the achievement gap.

**Chapter IX, Summary of Findings,** presents a summary of OLO’s key project findings.

**Chapter X, Recommended Discussion Issues,** concludes this report with a set of recommended discussion issues aimed at improving the Council’s oversight of funds appropriated to MCPS.

**Chapter XI, Agency Comments,** provides the MCPS Superintendent’s comments on the final draft of this report.

The **Appendix** provides data tables for each of the achievement measures in this report plus other relevant information.

#### **D. Acknowledgements**

OLO received a high level of cooperation from everyone involved in this study. In particular, OLO appreciates the assistance of Dr. Kimberly Statham, Deputy Superintendent of Teaching, Learning, and Programs for MCPS. We also acknowledge the MCPS staff below who provided invaluable assistance:

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- Ms. Lori-Christina Webb, Executive Director to the Deputy Superintendent
- Mr. Sherwin Collette, Chief Technology Officer
- Dr. Erick Lang, Associate Superintendent, Curriculum and Instruction
- Ms. Jeannie Franklin, Director of Consortia Choice and Application Program Services

#### **E. Key Terms and Definitions**

OLO used the following terminology in this report to describe subgroups of students by race, ethnicity, and service group status.

- **Asian** refers to students who refer to themselves as Asian or Asian American.
- **Black** refers to students who refer to themselves as black/Non-Hispanic or African American.
- **Latino** refers to students who refer to themselves as either Latino or Hispanic. Latino students can be of any race (e.g., white, black, or Asian).
- **White** refers to students who refer to themselves as white/Non-Hispanic or Caucasian.
- **Multiracial** refers to students who identify themselves as having a multi-racial background.
- **Students receiving free and reduced price meals (FARMS)** are students who are currently receiving free and reduced price meals. These students are also referred to as “low-income” students in the report.
- **English language learners** are students with limited English proficiency currently enrolled in English for Speakers or Other Languages (ESOL) courses.
- **Students with disabilities** are students with individualized education plans that receive special education services.



## **Chapter II: Background**

This chapter briefly describes what is meant by the term achievement gap, reviews the factors that contribute to the gap and the performance of U.S. students in international comparisons, and explains the importance of 21<sup>st</sup> century skills. Overall, this review suggests that:

- Nationally, progress to close the achievement gap has slowed since the early 1980's;
- Researchers find that a variety of school, community, economic, and familial factors contribute to the achievement gap, but views are mixed regarding how to narrow the gap;
- International assessments of academic performance indicate that U.S. students tend to fall in the middle of the pack;
- The persistent gaps in U.S. students' performance by race, ethnicity, and income are a contributing factor to the lag in U.S. students' performance compared to other nations; and
- Since assessment tests for 21<sup>st</sup> century skills are still being developed, the achievement gaps among U.S. students by race, ethnicity, and service group status for these skills are unknown.

### **A. What is the Achievement Gap?**

The term “achievement gap” typically refers to disparities in one or more measures of educational performance (e.g., standardized test scores, graduation rates) among students by race, ethnicity and income. The achievement gap generally measures differences between high performing student groups (e.g., whites, Asians, and high-income students) and low performing student groups (e.g., blacks, Latinos, and low-income students). It can also compare differences in student performance by disability status and English language proficiency.

The achievement gap by race and ethnicity and the gap between low-income and affluent students are both long-standing, national challenges. Further, the measures that consistently evidence an achievement gap address practically every dimension of student performance. Some of the measures that consistently show disparities by race, ethnicity, income, disability status, and English language proficiency are rates of:

- Students who drop out;
- Students who enroll in college preparatory courses;
- Students who are identified as disabled or gifted; and
- Students who obtain college degrees.

Long-term trend assessment data from the National Assessment of Educational Progress (NAEP) demonstrates that the achievement gap narrowed among 9 year olds, particularly during the 1970's and 1980's. For example, the white-black achievement gap in reading for 9 year olds declined from 1973 to 1990; as did the gap in math among 9 and 13 year olds. Similarly, the white-Latino achievement gap in reading for 9 year olds narrowed during the 1970's and 1980's; the gap in math narrowed more since 1999. In contrast, the NAEP data show no progress narrowing the white-Latino gap in reading or in math for 13 year olds for at least 20 years.

Despite some narrowing of the achievement gap, the point spread between groups remains large, leaving black and Latino students at a substantial educational deficit. For example:

- A 16 point decrease in the white-black gap in reading achievement among 9 year olds since 1970 still left a 24 point gap in 2008;
- A 13 point decrease in the white-Latino gap in reading achievement among 9 year olds since 1975 still left a 21 point gap in 2008; and
- In 2008, the average black and Latino 12<sup>th</sup> graders demonstrated the same math proficiency as the average white 8<sup>th</sup> grader.<sup>2</sup>

## **B. The Opportunity Gap**

Researchers note that school, community, socioeconomic, and familial factors all contribute to the achievement gap. For example, Barton and Coley's synthesis of the achievement gap research on behalf of the Educational Testing Service identifies 16 factors related to life experiences and conditions that are correlated with cognitive development and academic achievement:<sup>3</sup>

- Curriculum rigor (e.g. participation in Advanced Placement courses)
- Teacher preparation (e.g. teacher certification or teaching outside of certification area)
- Teacher experience
- Teacher absence and turnover,
- Class size
- Availability of instructional technology
- Fear and safety at school
- Parent participation
- Frequent changing of schools
- Low birth weight
- Environmental damage (e.g. exposure to lead or mercury)
- Hunger and nutrition
- Talking and reading to babies and young children
- Excessive television watching
- Parent-pupil ratio
- Summer achievement gain/loss

Barton and Coley find that on each correlate, gaps exist by race and income and that there had been little change in these gaps between 2003 and 2009.<sup>4</sup> Based on a similar research synthesis regarding the correlates of the achievement gap, Linda Darling-Hammond describes the achievement gap as the “opportunity gap” because “when the evidence is examined, it is clear that educational outcomes for (low performing student subgroups) are at least as much a function of their unequal access to key educational resources, both inside and outside of school, as they are a function of race, class, or culture.”<sup>5</sup> Darling-Hammond cites five factors that create the opportunity gap:

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<sup>2</sup> Black and Latino 17 year olds on average scored 287 and 293 on the math NAEP in 2008, compared to white 13 year olds who on average scored 290 on the math NAEP in 2008 – see <http://nationsreportcard.gov>

<sup>3</sup> Barton and Coley, Parsing the Achievement Gap II, 2009 - <http://www.ets.org/Media/Research/pdf/PICPARSINGII.pdf>

<sup>4</sup> Ibid; Barton, Parsing the Achievement Gap, 2003 - [http://www.ets.org/Media/Education\\_Topics/pdf/parsing.pdf](http://www.ets.org/Media/Education_Topics/pdf/parsing.pdf)

<sup>5</sup> Darling-Hammond, The Flat World and Education, 2010 p. 32

- High levels of poverty and low levels of support for low income children's health and welfare, including early learning opportunities;
- Unequal allocation of school resources;
- Inadequate systems for providing high quality teachers and teaching to all children in all communities;
- Rationing of high quality curriculum through tracking and interschool disparities; and
- Factory-model school designs that have created dysfunctional learning environments for students and unsupportive settings for strong teaching (particularly at the secondary level).

Some research studies find that the neediest students in terms of academic performance often attend schools with the fewest resources, where they receive the weakest academic programs. At the secondary level this includes teachers who teach subjects that they are not certified to teach in high minority, high poverty school systems. As a result, the achievement gap often increases as students move through school.

Some researchers, such as Eric Hanushek, argue that the poor correlation between per pupil expenditures and student outcomes suggests that differential school resources do not matter.<sup>6</sup> They note, for example, that some of the highest per pupil expenditures occur among inner-city school systems with relatively poor academic performance.

Other researchers disagree, finding that how dollars are spent can make a significant difference. For example, Darling-Hammond attributes the narrowing of the achievement gap by race during the 2000's in New Jersey partly to the increased funding awarded to high poverty school urban systems under the Abbott case. She also states that resources spent to expand early childhood education and improve instruction, particularly to improve early literacy, helped to narrow the achievement gap.

Finally, some education policy experts examine factors beyond the school, arguing that school reforms, particularly those applied universally for all students, cannot narrow the achievement gap unless the income gap among student subgroups is narrowed as well. For example, Richard Rothstein and David Berliner contend that:

- The primary sources of school failure are outside of the school rather than inside the school;
- Compared with all other wealthy nations, the U.S. has the largest income gap between its wealthy and its poor citizens and does the least to mitigate the effects of poverty; and
- Targeted economic and social policies have more potential to improve the nation's schools than almost anything currently being proposed to improve schools.

To address the income inequalities that contribute to the achievement gap, they recommend the following strategic investments to improve the performance of low-income students:

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<sup>6</sup> See Hanushek, 1989, *The Impact of Differential Expenditures on School Performance: An Update in the Educational Evaluation and Policy Analysis*.

- Target income inequality by improving employment and income opportunities for low-income families (e.g. expand Earned Income Tax Credit);
- Increase affordable housing and use of vouchers to enable low-income families to reside in mixed and middle income communities;
- Expand school community health clinics; and
- Invest in early childhood education, after-school programs, and summer programs for low-income children.

### **C. Other “Gaps” in Achievement**

Two additional “gaps” in academic achievement provide context for understanding the achievement gap: the gap between students in the U.S. and students abroad on international comparisons of academic performance; and the gap between what U.S. students need to know for the 20<sup>th</sup> century compared to the 21<sup>st</sup> century. These two additional gaps are described below.

#### **1. The International Gap**

Beyond the persistent achievement gap by race and income, attention has increasingly been given to achievement gaps between U.S. students and students in other parts of the world. For example, Boykin and Noguera (2011) note that:

*When U.S. students are compared to students from other nations, especially in Europe and Asia ... (the U.S.) fall(s) in the middle of the pack, suggesting that there is room for improvement for U.S. students in general. For example, data from the Trends in International Mathematics and Science Study (TIMSS) show that 4<sup>th</sup> and 8<sup>th</sup> grade students in the United States fall significantly behind the math performance levels of students from nations such as Singapore, South Korea, Japan, Belgium, the Netherlands, Hungary, Slovenia, and the Slovak Republic.<sup>7</sup>*

Although international assessments of academic performance indicate that students from the U.S. tend to fall in the middle of the pack, some American subgroups and states do compete well in international comparisons. For example, Asian American 4<sup>th</sup> graders students ranked third worldwide on the TIMSS math assessment in 2007 and second on the science assessment.<sup>8</sup> Further, Massachusetts 4<sup>th</sup> graders ranked second worldwide in science achievement and tied third in math, while its 8<sup>th</sup> graders tied for first in science and six in mathematics.<sup>9</sup> These results suggest that if the U.S. narrowed its achievement gap between high and low performing subgroups, it could also improve its international rankings.

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<sup>7</sup> Boykin and Noguera, *Creating the Opportunity to Learn: Moving from Research to Practice to Close the Achievement Gap*, 2011, p. 4.

<sup>8</sup> NCES, *Status and Trends in the Education of Racial and Ethnic Groups*, 2011

<sup>9</sup> Massachusetts Department of Elementary and Secondary Education, *TIMSS Results Place Massachusetts Among World Leaders in Math and Science*, 2008 <http://www.doe.mass.edu/news/news.aspx?id=4457>

## 2. The 21<sup>st</sup> Century Skills Gap

Increasing attention has also focused on the gap between what students need to know to be college and career ready in the 20<sup>th</sup> century as compared to the 21<sup>st</sup> century. Whereas ‘twentieth century skills’ refers to basic knowledge and skills in mathematics and literacy, ‘21<sup>st</sup> century skills’ refers to both higher-order academic skills as well as “soft” or “non-cognitive” skills that enable youth to apply knowledge and generate new knowledge. Wagner refers to these higher-order “soft skills” as the following “Seven Survival Skills”:<sup>10</sup>

- Critical thinking and problem solving;
- Collaboration across networks and leading by influence;
- Agility and adaptability to a changing and uncertain world;
- Initiative and entrepreneurialism;
- Effective oral and written communication;
- Accessing and analyzing information; and
- Curiosity and imagination.

Researchers, such as Rothstein, have noted that schools must simultaneously focus on improving students basic and higher-order skills to narrow the achievement gap.<sup>11</sup> It’s unclear whether an achievement gap by race and income among 21<sup>st</sup> century skills exists since the tools to assess these skills are still being developed. But to close the achievement gap that matters most to employers, an understanding of the achievement gap among these 21<sup>st</sup> century skills is required.<sup>12</sup>

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<sup>10</sup> Wagner, *The Global Achievement Gap*, 2008. These skills are similar to those advocated by the Partnership for 21<sup>st</sup> Century Skills: learning and innovation skills (critical thinking, communication, collaboration and creativity, life and care skills (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, and leadership and responsibility), and information, media, and technology skills (information literacy, media literacy, and information, communications, and technology literacy).

<sup>11</sup> Rothstein notes that indeed, this is how higher income children learn in *Class and Schools: Using Social, Economic, and Educational Reform to Close the Black-White Achievement Gap*, 2004.

<sup>12</sup> The Partnership for 21<sup>st</sup> Century Skills advocates that states develop 21<sup>st</sup> century standards, assessments of these standards and aligned curriculum, professional development, and learning environments (see [www.P21.org](http://www.P21.org)).

### **Chapter III: Methods for Reviewing Data on the Achievement Gap**

The performance measurement trend data compiled for this project helps provide an overview of MCPS' progress in narrowing the achievement gap by race, ethnicity, and service group status. This finite set of measures was selected from a much larger set of potential measures. These measures not only reflect OLO's understanding of the characteristics and limits of the available data, but also incorporate OLO's decisions about what measures to include or exclude, as well as how to simplify the display of the data.

As described in Chapter III, ongoing changes at the federal, state, and local level have complicated these decisions. This chapter describes OLO's research methods for analyzing MCPS' progress in narrowing the achievement gap and the data sources used. It also explains how OLO addressed issues created by changing definitions, new race and ethnicity codes, and new privacy rules, and serves as a guide for reviewing data and information in the next three chapters.

#### **A. Overview of OLO's Research Methods**

Initially, OLO consulted with MCPS staff to identify a variety of measures for review that could provide data by student subgroups and trend data for five school years (from 2006-07 to 2011-12). OLO and MCPS identified 11 initial sets of data for review. Two sources of data were mined for this report: existing reports and websites from MCPS and the Maryland State Department of Education. These data sources are summarized in the table below.

**Table 3-1: Initial Project Measures, Data Sources, and Years**

<b>Project Measures</b>	<b>Data Sources</b>
School Readiness	MSDE: Children Entering School Ready to Learn: Maryland Model for School Readiness, 2006-07 to 2011-12
Maryland School Assessment (MSA) Scores	MSDE: Maryland Report Card, 2006-07 to 2011-12
Suspension Rates	MCPS: Annual Report on Our Call to Action, 2010 and 2011
Academic Eligibility	MCPS: Rethinam and Von Secker (December 2008), Scott (October 2009); and Annual Report on Our Call to Action, 2011 and 2012
Algebra 1 by Grade 8	MCPS: Talley (October 2011); Annual Report on Our Call to Action, 2012
Algebra 2 by Grade 11	MCPS: Talley (October 2011)
AP/IB Performance among Graduates	MCPS: Annual Report on Our Call to Action, 2010 and 2012
SAT/ACT Performance among Graduates	MCPS: SAT Participation and Performance Results for the Class of 2012; SAT Results for the Classes of 2006 to 2010
College and Career Readiness among Graduates	MCPS: CTE data for 2007 to 2010
Graduation Rates	MSDE: Maryland Report Card for Classes of 2010 to 2012
Dropout Rates	MSDE: Maryland Report Card for Classes of 2010 to 2012

Addressing the Effects of New Federal or Local Definitions. OLO compiled available data for this initial list of measures, with a particular focus on indicators whose definitions had changed since 2007. Based on this exercise, OLO identified changes to 4 of the 12 measures on the initial list, including two of the grade-level measures (graduation rates and dropout rates) and two of the above grade-level measures (completion of Algebra 1 by Grade 8 and SAT performance).<sup>13</sup>

These changes interrupted the data collection process and created incomplete datasets for each of these four indicators. In each case, OLO had to decide whether to retain the initial measure, substitute a new measure, or drop the measure from the list. As part of this process, OLO excluded any indicator with less than three years of data and considered comparable substitutes with more complete datasets. As a result, the measures selected for this study OLO excluded Completion of Algebra 2 by Grade 11 as indicator, because only two years of data were available at the time of OLO's data analysis (2010-2011).<sup>14</sup>

Next, OLO addressed issues raised by federal changes to MCPS' data due to new race and ethnicity codes and new privacy rules. The decisions about these issues, summarized below, reflect OLO's intent to maximize the use of available data and the number of measures reviewed for this study.

Reporting Consistent Indicators with Changed Federal Race and Ethnicity Codes. In 2010, new federal race and ethnicity codes took effect (see Chapter VII for details). OLO conducted sensitivity analyses of trends in student performance by race and ethnicity to see the effects of changes to the federal codes for race and ethnicity. OLO completed this analysis for those measures with definitions that did *not* change between 2007 and 2012 (e.g. MSA proficiency).

To carry out this analysis, OLO prepared two separate race and ethnicity datasets for each measure: one for the 2007-2010 period and another for 2011-2012 period (when such data was available). When the datasets from these two periods were aligned, the trend data for several measures showed only a slight bump in 2011 (when the codes changed) followed by a return to the same trend that was visible from four years of prior data.

Given these results, OLO opted to populate the five-year period for these indicators with data points that use two different sets of federal codes. So, for measures with data by race and ethnicity from 2007-2011 or 2012, the charts in the chapters that follow report the trend data for that entire period, recognizing that slight changes in the underlying student populations occurred from the beginning to the end of the period.

Addressing New Federal Privacy Requirements. In 2010, new federal privacy rules also took effect. To comply with these new requirements, MCPS no longer reports student performance by subgroup at the margins, i.e., the effect of these new federal rules is to exclude data that falls at or above 95% of the range or at or below 3% or 5% of the range.

In the charts in the chapters that follow, OLO used one of three options to address the exclusion of these data points and facilitate the reporting of trend data beyond 2010:

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<sup>13</sup> As described in Chapter VII, new federal regulations triggered changes in the calculation of graduation and dropout rates; locally, introduction of the Seven Keys to College Readiness triggered definition changes in the SAT performance and Algebra 1 indicators and introduction of a new indicator, Algebra 2 by Grade 11.

<sup>14</sup> MCPS released data on 2012 performance on this indicator in December 2012. Algebra 2 by Grade 11 with C or higher data will be included in OLO's analysis of MCPS' high school consortia later this year.

- If a subgroup performed at or above the 95<sup>th</sup> percentile in 2011 or 2012, an estimate of their performance based on the 95<sup>th</sup> percentile was used in the analysis;
- If a subgroup performed at or below the 5<sup>th</sup> percentile in 2011 or 2012, an estimate of their performance based on the 5<sup>th</sup> percentile was used in the analysis; and
- If data for every subgroup was not available for 2012, then 2011 serves as the last year of the trend analysis.

Exhibit 1 on the next page displays the 11 measures that OLO used to compile trend data for the performance of MCPS students for the five-year period from 2007 to 2012. The exhibit displays four grade-level measures, four above grade-level measures, three at-risk measures, and two measures dropped from the initial list. It indicates the data source, or whether data exists for part or all of the six year period. For the excluded measures, it indicates whether a substitute measure exists.

Of note, trend data for the graduation and dropout rates no longer reflect the measures that MCPS currently uses to benchmark student performance. Despite this limitation, these data points are included to provide some perspective on MCPS' progress in narrowing the gap. As additional trend data becomes available for the current definitions of these measures, they should be considered for analysis.

Some of the measures report data for two or more tests, i.e. reading and math, and/or report data for multiple grade levels. As a result, together these 11 indicator measures yield a total of 24 measures.



**Exhibit 1: Project Measures, Data Sources, and Data Years**

#	Measure or Indicator	Total Sets of Measures	Data Source		Data Available for School Years....						Notes	
			MSDE	MCPS	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012		
Grade Level Measures												
1	School readiness among MCPS kindergarteners	1	✓		✓	✓	✓	✓	✓	✓		
2	Proficiency on Maryland School Assessments (MSA) in reading and mathematics in Grades 3, 5, and 8	6	✓		✓	✓	✓	✓	✓	✓		
3	Graduation rates (four year cohort)	1	✓					✓	✓	✓	This measure differs from the leaver rate previously tracked.	
4	College and career readiness among graduates (i.e. meeting USM or CTE program requirements, or both)	1		✓	✓	✓	✓	✓			Measure categorized as grade level measure because 80% of graduates meet this benchmark.	
Above Grade Level Measures												
5	MSA advanced scores in reading and mathematics in Grades 3, 5, and 8	6	✓		✓	✓	✓	✓	✓	✓		
6	Completion of Algebra 1 by Grade 8 with a Grade of C or higher	1						✓	✓	✓	From 2007-10, MCPS tracked completion of Algebra 1 by Grade 8 with a grade of D or higher instead of this measure.	
7	Passing score on AP (3) or IB exams (4) among graduates	1		✓				✓	✓	✓		
8	SAT performance of 1,650 or above or ACT score of 24 or above among graduates	1		✓	✓	✓	✓	✓	✓	✓		
At Risk Indicators												
9	Suspension rates by school level	3	✓	✓	✓	✓	✓	✓	✓	✓	2012 data incomplete due to privacy restrictions.	
10	Academic ineligibility rates (3 or 4 quarters) among middle and high school students	2		✓	✓	✓	✓	✓	✓	✓		
11	Dropout rates (four year cohort)	1	✓					✓	✓	✓	This measure differs from the annual dropout rate previously tracked.	
Initial Measures Later Excluded												
	Completion of Algebra 2 by Grade 11			✓					✓	✓	Excluded: only two years of data.	
	Career and technology education pathway completers			✓	✓	✓	✓	✓			Excluded: data incomplete due to privacy restrictions substituted #8.	
Total # of Measures		24										

## **B. Guide for Reviewing the Analysis Chapters**

A central purpose of this report is to understand where MCPS has made progress in narrowing the achievement gap, where has it achieved mixed progress, and where MCPS has lost ground. The next three chapters are organized around MCPS' progress at narrowing the achievement gap.

- **Chapter V, Measures Where the Gap Has Narrowed**, describes trends for those measures where MCPS has consistently achieved progress in narrowing the gap between high and low performing subgroups by race, ethnicity, and service group status. The five measures are: **school readiness, MSA proficiency, suspensions, academic ineligibility, and graduation rates** using the four year cohort measure.
- **Chapter VI, Measures Where Progress Was Mixed**, describes trends for those measures where MCPS has achieved progress in narrowing some of the gap between some low and high performers, but where some gaps have widened or stagnated, as well. The two measures are: **dropout rates and career and college readiness among graduates**.
- **Chapter VII, Measures Where the Gap Has Widened**, describes trends for four measures where MCPS has lost ground and achievement gaps have widened over time between low and high performing subgroups. The four measures are: **Algebra 1 completion by Grade 8 with a C or better, MSA advanced scores, AP/IB performance among graduates, and SAT/ACT performance among graduates**.

OLO's analysis in Chapters IV – VI is based on a review of descriptive data to describe trends in student subgroup performance. Statistical testing to determine whether descriptive changes in subgroup performance were statistically significant was beyond the scope of this study because OLO's analysis relies on district level data by subgroup rather than individual student level data.

Each chapter presents an analysis of performance measurement data in tabular form for each measure reviewed. Using Table 3-2, Summary of School Readiness Achievement Measures (on the next page) as an example, each summary statistic table describes the following data points:

- **Current Performance.** Data on the percent of students meeting the benchmark for the most current year with available data are presented for all students and every race, ethnicity, and service subgroup tracked by MCPS.<sup>15</sup> Using School Readiness as an example, 81% of all MCPS kindergarteners demonstrated full readiness for school based on the Maryland Model for School Readiness in 2012, but only 52% of students with disabilities demonstrated full school readiness.
- **Performance Ratios.** To describe the magnitude of the achievement gap, data describing the relative performance of each subgroup to a reference group are also reported for each measure for the most current year with available data. For subgroups by race and ethnicity, the reference groups for each performance ratio are white students. Going back to the School Readiness example, since 86% of Asian students demonstrated full school readiness compared to 88% of white students, Asian kindergarteners were 98% as likely as white students to be ready for school in 2012.<sup>16</sup>

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<sup>15</sup> Too few Native American and Pacific Islander students are enrolled in MCPS to report these subgroup trends separately. Native American and Pacific Islander students are included in the All Students subgroup.

<sup>16</sup> Calculation based on the ratio of performance % Asian students/% whites students = 86%/88% = 98%.

Depending on the data available, the reference group for service subgroups are students who did not receive the service (e.g. special education/regular education) or all students if data by non-service groups is not available (e.g. special education/all students).<sup>17</sup>

**Table 3-2: Summary of MCPS School Readiness Measures, 2007-12**

Groups	2012 Performance	2012 Performance Ratio	2007-12 Performance Change	2007-12 Gap Change
All Students	81%	--	19%	--
<b>Students by Race and Ethnicity</b>				
White	88%	--	11%	--
Asian	86%	98%	19%	-71%
Black	77%	88%	26%	-39%
Latino	71%	81%	34%	-35%
Multiracial	87%	99%	--	--
<b>Students by Service Group</b>				
Special Education	52%	63%	16%	24%
Regular Education	83%	--	19%	--
ESOL	71%	83%	42%	-42%
English Proficient	86%	--	13%	--
FARMS	71%	83%	34%	-29%
Non-FARMS	86%	--	16%	--

Shows Asian kindergartners, compared to white kindergartners, were 98% as likely to be fully ready for school.

Shows a 19% gain in the numbers of all kindergartners who were “fully ready” for school since 2007

Shows a 24% gain in the 2007 school readiness gap by special education status.

- Percent Change in Performance.** Data describing the change in the percent of all students and each subgroup meeting the benchmark for performance are also described for each measure based on the years with available data (e.g. 2007-2012). For indicators measured in the affirmative, school systems aspire to narrow the achievement gap by increasing the performance of all students while accelerating the performance of the lowest-performing subgroups. Referring to the School Readiness example again, this goal was achieved by race and ethnicity, as MCPS achieved an 11% and 19% increase between 2007 and 2012 in the number of white and Asian kindergarten meeting this benchmark, but 26% and 34% increases among black and Latino students. Data regarding the numeric or point changes in performance by indicator are reported in the appendix (see Appendix A).
- Percent Change in the Achievement Gap.** Data describing the change in the achievement gap as the differences in the performance between low- and high-achieving subgroups are also presented for each measure. Trend data is presented for the years with available data; the reference group for the achievement gap metric varies by subgroup type. For the race and ethnicity subgroups, the reference group is white students, although they are not always the highest performing racial subgroup. Using the School Readiness example, the achievement gap between white and black students decreased by 39 percent between 2007 and 2012, while the gap between special and regular education students increased by 24 percent during this time frame. Data on point changes in the achievement gap are reported in the appendix.

<sup>17</sup> Data points reliant on MSDE data provide service vs. non-service group comparisons, while data from MCPS compares service groups to all students.

Finally, an estimate of how many years it would take to eliminate the achievement gap is also presented for measures where there has been progress in narrowing the gap since 2007. This estimate is based on the assumption that the prior rate of narrowing the achievement gap on a measure can be used to estimate the rate at which the gap will narrow into the future.

Using the School Readiness example, the school readiness gap between white and black students has declined by 39 percent over five years, or at an annual rate of 7.8%. Assuming a 7.8% average annual decline in the achievement gap into the future, it would take another 13 years to fully eliminate the gap on this measure. These estimates are offered as context for what it might take to fully eliminate each gap, rather than as strong predictions of how long it will actually take to eliminate the gap.

More complete information regarding the trend data used for each performance measure to generate these calculations is included in the appendix. Table 3-3 offers a road map for the chapter and appendix locations of the analyses completed by OLO's for each of the 11 student performance measures reviewed in this report.

**Table 3-3: Roadmap to OLO Report 2013-3 Analyses of Achievement Gap Measures**

Performance Measure	Analysis located in	Additional data in:
<i>Grade Level Measures</i>		
<b>1. School Readiness</b>	Chapter IV, pages 16-18	Appendix A, page 5
<b>2. MSA Proficiency</b>	Chapter IV, pages 18-21	Appendix B, page 7
<b>3. Graduation</b>	Chapter IV, pages 25-26	Appendix J, page 32
<b>4. College or Career Readiness</b>	Chapter V, pages 29-30	Appendix I, page 31
<i>Above Grade Level Measures</i>		
<b>5. MSA Advanced Scores</b>	Chapter VI, pages 33-36	Appendix C, page 15
<b>6. Algebra 1 by Grade 8 with C or Higher</b>	Chapter V, pages 31-32	Appendix F, page 27
<b>7. AP/IB Performance</b>	Chapter VI, pages 36-37	Appendix G, page 28
<b>8. SAT/ACT Performance</b>	Chapter VI, pages 38-39	Appendix H, page 29
<i>At-Risk Measures</i>		
<b>9. Suspensions</b>	Chapter IV, pages 21-23	Appendix D, page 22
<b>10. Academic Ineligibility</b>	Chapter IV, pages 23-25	Appendix E, page 25
<b>11. Dropouts</b>	Chapter V, pages 27-28	Appendix K, page 33

## Chapter IV: Measures to Help Close the Achievement Gap

OLO analysis of performance data for MCPS students across 11 measures demonstrates that MCPS has achieved progress since 2007 in narrowing the achievement gap across five sets of measures:

- School readiness
- Proficiency on the Maryland School Assessments (MSAs)
- Suspensions
- Academic ineligibility
- Graduation rates

These measures reflect both grade-level expectations of student performance – students will enter kindergarten ready to learn, meet grade level expectations in mathematics and reading, and graduate from high school within four years – and at-risk indicators of student performance – suspensions and failure to maintain at minimum a 2.0 grade point average in three or four marking periods. While sizable achievement gaps remain for the at-risk measures, a majority of each subgroup reached the desired benchmark on each measure, and the performance of each subgroup improved. The rest of this chapter summarizes the performance data and achievement gap trends for these five measures. For more detailed information about each measure, see Appendices A, B, D, E, and J.

### A. School Readiness

Since 2002, Maryland kindergarten teachers have used the Maryland Model for School Readiness (MMSR) to document their students' readiness for school. The MMSR measures student performance across seven domains: *Social and Personal, Language and Literacy, Mathematical Thinking, Scientific Thinking, Social Studies, the Arts; and Physical Development*.

Teachers administer this portfolio-based assessment during the first eight weeks of school. Three categories of readiness are used to report student performance in each of the seven domains:

- **Full readiness** exists when a student consistently demonstrates the skills necessary for kindergarten;
- **Approaching readiness** exists when a student inconsistently demonstrates these skills; and
- **Developing readiness** exists when a student does not demonstrate the skills required for kindergarten.

MSDE reports statewide student subgroup scores and each school system's scores across the seven domains to describe students overall readiness for kindergarten. MSDE also aggregates domain outcomes into composite scores and reports this data for each school system and subgroup. Appendix A describes trends in MMSR composite scores from 2007-2012.

Table 4-1 on the next page summarizes OLO's analysis of the MMSR school readiness data for MCPS to present information on four key statistics by student subgroup:

- 2012 performance – percent of students entering kindergarten fully ready for school;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2007-12; and
- Percent change in the achievement gap by race, ethnicity, and service group from 2007-12.

**Table 4-1: Summary of MCPS School Readiness Measures, 2007-12**

Groups	2012 Performance	2012 Performance Ratio	2007-12 Performance Change	2007-12 Gap Change
All Students	81%	--	19%	--
<b>Students by Race and Ethnicity</b>				
White	88%	--	11%	--
Asian	86%	98%	19%	-71%
Black	77%	88%	26%	-39%
Latino	71%	81%	34%	-35%
Multiracial	87%	99%	--	--
<b>Students by Service Group</b>				
Special Education	52%	63%	16%	24%
Regular Education	83%	--	19%	--
ESOL	71%	83%	42%	-42%
English Proficient	86%	--	13%	--
FARMS	71%	83%	34%	-29%
Non-FARMS	86%	--	16%	--

OLO's analysis demonstrates the following:

- **Current Performance Results** - All subgroups by race and ethnicity demonstrated high levels of school readiness in 2012, ranging from a low of 71% for Latino students, to a high of 88% for white students. The performance of students by service subgroups was more variable, ranging from a low of 52% for students with disabilities to a high of 86% for both English-proficient students and students not receiving free and reduced priced meals.
- **Current Performance Ratios** - Except for students with disabilities, lower-performing subgroups are 81-88% as likely as their higher-performing peers to meet the school readiness benchmark. For example, students eligible for FARMS are 83% as likely as students not eligible for FARMS to enter kindergarten ready for school. Students with disabilities are only 63% as likely as students in regular education to enter kindergarten ready for school.
- **Change in Performance Results** - Each subgroup achieved performance gains on the benchmark between 2007 and 2012, with most of the lower-performing subgroups making greater gains than their higher-performing peers. For example, black and Latino students experienced 26% and 34% increases respectively in their school readiness composite scores, compared to 11% and 19% increases respectively for white and Asian students.
- **Change in the Achievement Gap Results** - The achievement gap narrowed between every high- and low-performing subgroup pair, except by disability status. Between 2007 and 2012, the gap between English proficient and English language learners diminished by 42%, between white and black students by 39%, between white and Latino students by 35%, and between students ineligible for FARMS and students receiving FARMS by 29%. However, the gap between students in regular education and students receiving special education services increased by 24%.

Finally, since the achievement gap on this measure narrowed between 2007 and 2012, OLO can estimate how many years it would take to eliminate the school readiness gap between particular subgroups if future rates of progress were to equal the average rates of the past five years:

- The white-black gap could be eliminated by 2025 (in 13 years) assuming an annual reduction in the school readiness gap of 7.8%.<sup>18</sup>
- The white-Latino gap could be eliminated by 2026 (in 14 years) assuming an annual reduction in the school readiness gap of 6.9%.
- The gap by English language proficiency could be eliminated by 2024 (in 12 years) assuming an annual reduction in the school readiness gap of 8.4%.
- The gap by income (i.e. FARMS status) could be eliminated by 2029 (in 17 years) assuming an annual reduction in the school readiness gap of 5.8%.

## **B. MSA Proficiency**

MSDE uses the Maryland School Assessments (MSAs) in reading, mathematics, and science to gauge the performance of elementary and middle grade students across the state in these core academic areas. The MSAs align with the Maryland Voluntary Curriculum; they are administered to students in Grades 3-8. MSDE uses the MSAs to hold schools and school systems accountable for narrowing the achievement gap; local school systems also use the MSAs to target school improvement efforts.

Student performance on the MSAs is scored at three levels:

- **Basic** for students who do not meet grade level expectations;
- **Proficient** for students who meet grade level expectations; and
- **Advanced** for students who meet above grade level expectations.

The current benchmark of whether students meet performance expectations is proficient or advanced.

MSDE reports MSA scores by student subgroup for each school system and for the state as a whole. Appendix B describes MCPS' trends in proficient and above MSA scores in reading and mathematics for Grades 3, 5, and 8 from 2007-2012. Tables 4-2 thru 4-4 summarize OLO's analysis of MCPS' MSA proficiency data by grade level and student subgroup on four key statistics:

- 2012 performance – percent of students reaching MSA proficiency benchmarks in reading and mathematics;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2007-12; and
- Percent change in the MSA proficiency gap by race, ethnicity, and service group from 2007-2012.

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<sup>18</sup> The number of years to eliminate the gap X is calculated as  $X=100/\text{annual rate of closing the gap}$ . So for the white-black gap in school readiness, this is calculated as  $X=110/7.8=12.8$  years.

**Table 4-2: Summary of MCPS MSA Proficiency Measures in Grade 3, 2007-12**

Groups	Proficient Reading Scores				Proficient Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	89%	--	5%	--	90%	--	7%	--
<b>Students by Race and Ethnicity*</b>								
White	95%	--	1%	--	95%	--	2%	--
Asian	95%	100%	3%	-94%	95%	100%	0%	-100%
Black	79%	83%	8%	-21%	80%	84%	15%	-38%
Latino	83%	87%	10%	-33%	84%	89%	14%	-45%
Multiracial	92%	97%	--	--	94%	99%	--	--
<b>Students by Service Group</b>								
Special Ed.	72%	80%	10%	-16%	64%	69%	13%	-7%
Regular Ed.	90%	--	4%	--	93%	--	6%	--
ESOL	79%	87%	18%	-39%	81%	87%	24%	-43%
English Prof.	91%	--	5%	--	93%	--	8%	--
FARMS	79%	83%	12%	-25%	80%	85%	18%	-34%
Non-FARMS	94%	--	4%	--	95%	--	5%	--
* Subgroup scores above 95% not reported on MSA, so 95% used for analysis								

**Table 4-3: Summary of MCPS MSA Proficiency Measures in Grade 5, 2007-12**

Groups	Proficient Reading Scores				Proficient Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	94%	--	12%	--	88%	--	4%	--
<b>Students by Race and Ethnicity*</b>								
White	95%	--	2%	--	95%	--	2%	--
Asian	95%	100%	4%	-100%	95%	100%	1%	-100%
Black	88%	93%	22%	-67%	77%	81%	12%	-27%
Latino	90%	94%	28%	-77%	79%	83%	8%	-20%
Multiracial	95%	100%	--	--	94%	99%	--	--
<b>Students by Service Group*</b>								
Special Ed.	78%	83%	27%	-34%	66%	73%	16%	-21%
Regular Ed.	95%	--	10%	--	90%	--	3%	--
ESOL	80%	84%	58%	-56%	65%	86%	9%	-2%
English Prof.	95%	--	11%	--	91%	--	6%	--
FARMS	86%	91%	32%	-66%	75%	80%	11%	-16%
Non-FARMS	95%	--	5%	--	94%	--	4%	--
* Subgroup scores above 95% not reported on MSA, so 95% used for analysis								



**Table 4-4: Summary of MCPS MSA Proficiency Measures in Grade 8, 2007-12**

Groups	Proficient Reading Scores				Proficient Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	88%	--	14%	--	77%	--	14%	--
<b>Students by Race and Ethnicity*</b>								
White	95%	--	5%	--	91%	--	8%	--
Asian	95%	100%	10%	-100%	94%	103%	8%	13%
Black	79%	83%	28%	-44%	60%	66%	39%	-24%
Latino	78%	82%	34%	-48%	60%	65%	30%	-18%
Multiracial	95%	100%	--	--	86%	94%	--	--
<b>Students by Service Group</b>								
Special Ed.	66%	73%	54%	-37%	45%	56%	39%	-11%
Regular Ed.	90%	--	10%	--	80%	--	11%	--
ESOL	46%	51%	66%	-16%	45%	57%	45%	-13%
English Prof.	89%	--	13%	--	78%	--	13%	--
FARMS	74%	79%	41%	-40%	54%	62%	38%	-13%
Non-FARMS	94%	--	10%	--	87%	--	13%	--
* Subgroup scores above 95% not reported on MSA, so 95% used for analysis								

An analysis of the data presented in Tables 4-2 through 4-4 demonstrates the following:

- **Current Performance Results:**
  - **Reading** – Most student subgroups in Grades 3, 5, and 8 demonstrated high levels of reading proficiency in 2012. On average, 95% or more of white, Asian, and multiracial students reached this benchmark compared to 78-90% of black and Latino students. Results were more variable across service groups with:
    - In Grade 3, 90-94% of non-service subgroups demonstrating proficiency compared to 72-79% of service subgroups.
    - In Grade 5, 95% or more of non-service subgroups meeting the mark compared to 78-86% of service subgroups.
    - In Grade 8, 89-94% of non-service subgroups achieving proficiency compared to 46-74% of service subgroups.
  - **Mathematics** – A clear majority of most subgroups met the MSA math proficiency benchmark in 2012. More specifically:
    - In Grades 3 and 5, at least 95% of white and Asian students reached the proficiency benchmark, compared to 77-84% of black and Latino students; and 90-95% of the non-service subgroups reached this mark, compared to 64-81% of the service subgroups.

- In Grade 8, 60% of black and Latino students met this benchmark, compared to 91-94% of white and Asian students; 78-87% of non-service subgroups demonstrated proficiency in math, compared to 45-54% of students who received services.
- **Performance Ratios** – Students in subgroups with lower scores are more likely to match the performance of their higher-performing peers in reading than in math. For example, Grade 5 students receiving FARMS were 91% as likely as students not receiving FARMS to achieve proficiency in reading, but only 80% as likely to demonstrate proficiency in math.
- **Change in Performance Results** – In both reading and mathematics, every subgroup achieved performance gains in MSA proficiency between 2007 and 2012, with most of the lower-performing subgroups making greater gains than their higher-performing peers. For example, mathematics scores among Grade 8 students receiving services increased by 38-45%, compared to an 11-13% increase in proficiency for their peers who did not receive services.
- **Change in the Achievement Gap Results** - The achievement gap has narrowed across all grade levels in both reading and math since 2007. Generally proficiency gaps in reading scores narrowed at faster rates than those in math. For example,
  - There was a 48% reduction in Grade 8 white-Latino gap in reading proficiency compared to an 18% reduction in the gap in math proficiency
  - There was a 40% reduction in the Grade 8 gap by FARMS status in reading proficiency compared to a 13% reduction in the gap in math proficiency.

Given these rates of progress, the achievement gaps in MSA reading and math proficiency across Grades 3, 5, and 8 could be eliminated in 6.5 to 250 years, depending on the measure considered.<sup>19</sup>

### **C. Suspensions**

Under Board of Education policy, MCPS suspends students out of school for both discretionary and non-discretionary reasons. MCPS must suspend students for specific incidents that include bomb threats, distribution of intoxicants, firearms possession, physical attacks of students and/or staff, and use of weapons to cause bodily harm. MCPS may suspend students for most non-violent offenses such as disrespect, insubordination, refusal to obey school policies, theft, inciting/participating in a disturbance, and classroom disruptions.

MCPS tracks and reports data on out-of-school suspensions by school level (elementary, middle and high schools) and by student subgroup. Appendix D describes trend data on MCPS' out-of-school suspension rates at the elementary, middle school, and high school levels by student subgroups from 2007-2011.<sup>20</sup> Tables 4-5 and 4-6 on the next page summarize OLO's analysis of MCPS' suspension data to present information on four key statistics by student subgroup:

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<sup>19</sup> At the low end, this range reflects the estimated 6.5 years it could take to close the white-Latino gap in Grade 5 reading assuming an average 15.3% decline annually; and at the high end, this range reflects the estimated 250 years it would take to close the gap by ESOL status in Grade 5 math assuming an average annual 0.4% decline in this gap.

<sup>20</sup> 2011 data is reported because suspension rates below 3 percent were not reported by subgroup for 2012 in compliance with federal privacy guidelines. For consistency, high school suspension data is reported through 2011.

- 2011 performance – percent of students who receive out-of-school suspensions;
- 2011 performance ratios that describe the relative performance of subgroups;
- Percent change in performance from 2007-11; and
- Percent change in the suspension gap by race, ethnicity, and service group from 2007-11.

**Table 4-5: Summary of MCPS Suspension Measures for Elementary and Middle Schools, 2007-11**

Groups	Elementary School Students				Middle School Students			
	Performance Measures			2007-11 Gap Change	Performance Measures			2007-11 Gap Change
	2011 Performance	2011 Ratio	2007-11 Change		2011 Performance	2011 Ratio	2007-11 Change	
All Students	0.6%	--	-57%	--	4.1%	--	-45%	--
<b>Students by Race and Ethnicity</b>								
White	0.2%	--	-67%	--	1.7%	--	-45%	--
Asian	0.2%	100%	-50%	-100%	1.4%	82%	-48%	-25%
Black	1.3%	650%	-59%	-58%	8.8%	518%	-46%	-46%
Latino	0.6%	300%	-60%	-78%	4.8%	282%	-48%	-50%
Multiracial	0.7%	350%	--	--	4.3%	253%	--	--
<b>Students by Service Group*</b>								
Special Ed.	2.3%	383%	-38%	-26%	10.8%	263%	-29%	-14%
ESOL	0.5%	83%	-58%	-50%	4.2%	101%	-48%	-83%
FARMS	1.1%	183%	-61%	-64%	8.3%	202%	-45%	-46%
*Performance ratios compare service groups to all students								

**Table 4-6: Summary of MCPS Suspension Measures for High Schools, 2007-11**

Groups	2011 Performance	2011 Performance Ratio	2007-11 Performance Change	2007-11 Gap Change
All Students	4.4%	--	-33%	--
<b>Students by Race and Ethnicity</b>				
White	2.1%	--	-38%	--
Asian	0.9%	43%	-61%	9%
Black	9.8%	467%	-26%	-46%
Latino	5.0%	238%	-47%	-50%
Multiracial	4.0%	190%	--	--
<b>Students by Service Group*</b>				
Special Education	9.6%	218%	-32%	-32%
ESOL	5.0%	114%	-36%	-50%
FARMS	8.5%	193%	-35%	-36%
*Performance ratios compare service groups to all students				

An analysis of the data presented in Tables 4-5 and 4-6 demonstrates the following:

- **Current Performance Results** – In 2011, suspension rates by subgroup at the elementary, middle, and high school levels vary widely:
  - At the elementary level, 0.2% of white and Asian students were suspended, compared to 1.3% of black students; and 0.6% of all students were suspended, compared to 2.3% of students with disabilities and 1.1% of students receiving FARMS;
  - At the middle school level, 1.7% of white students were suspended compared to 8.8% of black students; and 4.1% of all students were suspended compared to 10.8% of students in special education, and 8.3% of students receiving FARMS; and
  - At the high school level, 2.1% of white students were suspended compared to 9.8% of black students; and 4.4% of all students were suspended compared to 9.6% of students in special education and 8.5% of students receiving FARMS.
- **Performance Ratios** – At each school level, black students and students with disabilities are far likelier to be suspended than their peer subgroups. For example, at the elementary level,
  - Black students were nearly 6 times (550%) more likely than white students to be suspended in 2011; and
  - Students with disabilities were almost 3 times (283%) more likely than all students to be suspended in 2011.
- **Change in Performance Results** - Out-of-school suspension rates have generally declined at the same rate among all students and subgroups across each school level. For example, most elementary school subgroups experienced a 50-67% decline in their suspension rates, and most middle school subgroups experienced a 45-48% decline in their suspension rates. The decline in suspension rates at the high school level was more variable among subgroups; at each school level, students with disabilities experienced slower declines in their suspension rates than other subgroups. For example, suspension rates among all elementary students declined by 57% compared to a 38% reduction for elementary students with disabilities.
- **Change in the Achievement Gap Results** – Since 2007, the gap in suspension rates between every high- and low-performing subgroup pair at each school level narrowed. Progress in narrowing the suspension gap ranged between 26-78% at the elementary level, between 14-83% at the middle school level, and between 32-50% at the high school level. At these rates, eliminating each suspension gap could take another 36 years.

#### **D. Chronic Academic Ineligibility**

In MCPS, secondary students must maintain a marking period average of 2.0 or higher and fail no more than one course per marking period to be eligible to participate in most extracurricular activities, which include interscholastic athletics and student government.<sup>21</sup> The chronic academic ineligibility rate is the percentage of middle or high school students who are not eligible to participate in designated extracurricular activities three or four marking periods in a school year.

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<sup>21</sup> See Montgomery County Board of Education Policy IQD-RA, Academic Eligibility for High School Students Who Participate in Extracurricular Activities

MCPS tracks and reports its chronic academic ineligibility rate by school level (middle and high school) and by student subgroup. Appendix E describes trend data on MCPS' chronic academic ineligibility rates at the middle and high school levels by student subgroups from 2007-2011.<sup>22</sup> Table 4-7 summarizes OLO's analysis of MCPS' academic ineligibility data to present information on four key statistics by student subgroup:

- 2011 performance – percent of students who were academically ineligible for three or four quarters;
- 2011 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2007-11; and
- Percent change in the academic ineligibility gap by race, ethnicity, and service group from 2007-11.

**Table 4-7: Summary of MCPS Academic Ineligibility Measures, 2007-11**

Groups	Middle School Ineligibility (3 or 4 quarters)				High School Ineligibility (3 or 4 quarters)			
	Performance Measures			2007-11 Gap Change	Performance Measures			2007-11 Gap Change
	2011 Performance	2011 Ratio	2007-11 Change		2011 Performance	2011 Ratio	2007-11 Change	
All Students	5.2%	--	-43%	--	13.4%	--	-10%	--
<b>Students by Race and Ethnicity</b>								
White	1.5%	--	-46%	--	5.0%	--	-21%	--
Asian	0.9%	60%	-65%	200%	4.6%	92%	-33%	-167%
Black	9.5%	633%	-48%	-49%	21.4%	428%	-18%	-17%
Latino	10.0%	667%	-45%	-44%	26.5%	530%	-13%	-11%
Multiracial	3.7%	247%	--	--	9.2%	184%	--	--
<b>Students by Service Group*</b>								
Special Ed.	13.5%	260%	-34%	-27%	25.1%	187%	-17%	-24%
ESOL	10.2%	196%	-29%	-4%	22.2%	166%	-3%	11%
FARMS	12.0%	231%	-46%	-47%	27.6%	206%	-11%	-12%
* Performance ratios compare service groups to all students								

An analysis of the data presented in Table 4-7 demonstrates the following:

- **Current Performance Results** – Data in 2011 show academic ineligibility rates vary widely by subgroup at the middle and high school levels. At the middle school level, chronic academic ineligibility rates ranged from a low of 1-2% for white and Asian students to a high of 10-14% for black and Latino students and students receiving ESOL, special education, or FARMS. At the high school level, chronic academic ineligibility rates ranged from a low of 5% of white and Asian students to a high of 21-28% among black and Latino students and students receiving services.

<sup>22</sup> 2011 data is reported because academic ineligibility rates below 3 percent are not publically reported by subgroup for 2012 in compliance with federal privacy guidelines described in Chapter VII on p. 54.

- **Performance Ratios** – Students of color (black, Latino, and multiracial students) and students receiving services are far more likely to be unable to participate in extracurricular activities because they are academically ineligible. In middle school, a Latino student is nearly six times (567%) and a black student is five times (533%) more likely than a white student to be academically ineligible for three or four quarters. At the high school level, a Latino student is four times (430%) more likely and a black student is three times (328%) more likely than a white student to be academically ineligible for three or four quarters.
- **Change in Performance Results** – Chronic academic ineligibility rates for all students and each subgroup at both secondary school levels have declined substantially since 2007, particularly at the middle school level. For example, at the middle school level the rate for all students declined by 43% through 2011, or three times more than the 13% decline at the high school level.
- **Change in the Academic Ineligibility Gap** – The data show that the disparity in chronic academic ineligibility rates narrowed for every subgroup except English language learners. The middle school level, where the gap was cut by nearly half for black, Latino, and low income students, saw the most progress. At the high school level, where declines range from 11-24%, progress was more modest. At these rates of progress, it could take 8 years at the middle school level and 36 years at the high school level to eliminate these gaps.

## **E. Graduation Rates**

MSDE's definition and methods for tracking high school graduation rates has changed in recent years. Prior to 2010, a graduate was defined as a student who earned a diploma or special education certificate. Until 2010, MSDE also used the leaver to calculate annual graduation rates.

The leaver graduation rate is calculated by dividing the number of high school graduates by the sum of students in that class who dropped out of school in each of the previous four years plus the number of high school graduates. The leaver rate can bias estimated graduate rates upward because it not only includes students who take more than four years to graduate, but also excludes "whereabouts unknown" students who should be considered dropouts when calculating graduation rates.

In 2010-11, MSDE adopted the on-time graduate rate measure, also known as the four year cohort graduation rate, to align with national standards for measuring dropout rates across states. This on-time rate differs from the leaver rate because it measures the percent of first time 9<sup>th</sup> graders who graduate over a four year period. It also excludes students earning special education certificates or those taking more than four years to graduate. To capture graduation rates among students who take more than four years to earn a diploma, MSDE tracks a five year cohort graduation rate.

Appendix J describes trend data on MCPS four year cohort graduation rates from 2010 to 2012 to describe the percentage of 9<sup>th</sup> graders who graduated with their cohort four years later. Table 4-8 on the next page summarizes OLO's analysis of graduation data to present information of four statistics:

- 2012 performance – percent of students who graduated with their four-year cohort;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in four year cohort graduation rates from 2010-12; and
- Percent change in the graduation gap by race, ethnicity, and service group based on four year cohort graduations rates from 2010-12.

**Table 4-8: Summary of MCPS Graduation Measures, 2010-12**

Groups	2012 Performance	2012 Performance Ratio	2010-12 Performance Change	2010-12 Gap Change
All Students	87.4	--	1%	--
<b>Students by Race and Ethnicity*</b>				
White	94.0	--	0%	--
Asian	95.0	101%	0%	-7%
Black	82.3	87%	5%	-25%
Latino	76.7	82%	3%	-11%
Multiracial	90.8	97%	-2%	--
<b>Students by Service Group</b>				
Special Education	62.8	70%	6%	-8%
Regular Education	90.3	--	1%	--
ESOL	53.1	59%	1%	2%
English Proficient	89.3	--	2%	--
FARMS	76.6	84%	4%	-12%
Non-FARMS	90.9	--	1%	--
* Subgroup scores above 95% not reported on MSA, so 95% used for analysis				

An analysis of the data presented in Table 4-8 demonstrates the following:

- **Current Performance Results** – In 2012, MCPS posted an 87% on-time graduation rate for all students. Four year cohort graduation rates by subgroup varied from a low of 53% for English language learners to a high of 95% for Asian students.
- **Performance Ratios:** Latino students were 82% as likely as white students to graduate on time and black students were 87% as likely to graduate on time. Among service groups, students receiving special education services were 70% as likely to graduate within four years as students in regular education, English language learners were 59% as likely to graduate on time as English proficient students, and students receiving FARMS were 84% as likely to graduate on time as students not receiving FARMS.
- **Change in Performance Results** – The data show a 1% gain in the on-time graduation rate among all students between 2010 and 2012 with most of the lower performing subgroups making greater gains than their high performers. Specifically, the rates:
  - Stayed fairly constant for white, Asian, and most non-service subgroups (0 to -1%);
  - Increased for Latino and black students (3-5%); and
  - Increased for students receiving FARMS and special education services (4-6%).
- **Change in the Achievement Gap Results** – From 2010 to 2012, the graduation gaps declined by race, ethnicity, and most service groups. Only the on-time graduation gap by ESOL status increased during this time frame by 2%. Conversely, the gaps by race and ethnicity declined 11-25%, the gap by special education status declined by 8% and the gap by FARMS status declined by 12%. At these rates of progress, it could take 25 years to eliminate the graduation gap among these subgroups.

## **Chapter V: Measures Where Progress Was Mixed**

OLO's analysis of district-wide student data shows two measures where MCPS' progress in narrowing the achievement gap has been mixed:

- Dropout rates; and
- Completion of college and/or career requirements.

For these two measures, MCPS made gains by race and ethnicity, but lost ground by service group status, particularly for the disability and English learner subgroups. Overall performance increased for both measures, with less progress among some low-performing subgroups. A summary of the performance data and achievement gap trends for each of the mixed progress measures follows; more detailed information by measure is described in Appendices I and K.

### **A. Dropout Rates**

According to MSDE, "a dropout is any student who leaves school for any reason except death, before graduation or completion of a Maryland approved educational program and who is not known to have enrolled in another school or state-approved educational program during the current school year".<sup>23</sup> From 2007-2010, MCPS dropout rates were calculated by dividing the number of dropouts by the total number of students in Grade 9-12. This metric was known as the annual dropout rate, and by definition, excluded students who dropped out before starting high school.

To comply with federal requirements for calculating dropout rates that were comparable across jurisdictions, MSDE began tracking four year cohort dropout rates. Four year cohort dropout rates look back over four years to track the percentage of first time 9<sup>th</sup> graders who dropout of school within a four year cohort period.

Appendix K describes trend data on MCPS' four-year cohort dropout data for the Classes of 2010, 2011, and 2012. Table 5-1 on the next page summarizes OLO's analysis of dropout data for MCPS on this measure, and also presents information on four key statistics:

- 2012 performance – the four-year cohort dropout rate for the Class of 2012;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in dropout rates from 2010-12; and
- Percent change in the dropout gap by race, ethnicity, and service group from 2010-12.

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<sup>23</sup> 2010 Annual Report on Our Call to Action, p. 52



**Table 5-1: Summary of MCPS High School Dropout Measures, 2010-12**

Groups	2012 Performance	2012 Performance Ratio	2010-12 Performance Change	2010-12 Gap Change
All Students	6.8	--	-7%	--
<b>Students by Race and Ethnicity*</b>				
White	3.1	--	-11%	--
Asian	3.0	97%	0%	-81%
Black	9.4	303%	-16%	-18%
Latino	13.9	449%	-3%	0%
Multiracial	3.5	112%	15%	--
<b>Students by Service Group</b>				
Special Education	11.6	185%	-4%	2%
Regular Education	6.3	--	-8%	--
ESOL	26.2	455%	3%	8%
English Proficient	5.8	--	-12%	--
FARMS	11.1	205%	-11%	-12%
Non-FARMS	5.4	--	-9%	--
* Subgroup scores below 3% not reported by MSDE, so 3% used for analysis				

An analysis of the data presented in Table 5-1 demonstrates the following:

- **Current Performance Results** – Among all students, the four year cohort dropout rate among high school students was 6.8% in 2012, with rates among race and ethnicity subgroups varying from less than 3% to 14% and rates among students receiving services ranging from 11-26%.<sup>24</sup>
- **Performance Ratios** – Latino students were 349% more likely than white students to drop out of high school over the course of four years, and black students were 203% more likely to drop out. Among service groups, students receiving ESOL services were nearly 4 times (355%) more likely to dropout out of high school over a four year period than English proficient students, students receiving FARMS were 105% more likely to drop out than students not receiving FARMS, and students receiving special education services were 85% more likely to drop out than students in regular education.
- **Change in Performance Results** – All students as a group and most subgroups by race, ethnicity, and service group status experienced declines in their four year cohort dropout rates between 2010 and 2012, ranging from 3% to 16%. Alternatively, four year cohort dropout rates among Asian students held constant, increased by 3% for students receiving ESOL services, and by 15% among multiracial students.
- **Change in the Achievement Gap Results** - The achievement gap in cohort dropout rates narrowed by race, ethnicity, and income from 2010 to 2012, but increased by ESOL and special education status. Overall, the white-black gap narrowed by 81%, the white-Latino gap narrowed by 18%, and the gap by FARMS status narrowed by 12%. However, the gap by special education status increased by 2% and the gap by ESOL status increased by 8%.

<sup>24</sup> MSDE report that the four year dropout rate among Asian students is less than 3.0%.

## B. Completion of College and/or Career Requirements

MCPS students can earn their high school diplomas by meeting the basic requirements for graduation or completing one of three high school programs that prepares them for college or entry-level careers:

- Complete course requirements for admission to the University System of Maryland (USM)<sup>25</sup>;
- Complete an approved Career and Technology Education (CTE) program<sup>26</sup>; or
- Complete course requirements for USM and requirements for a CTE program.

Students completing any of these three options are college- and career-ready as graduates. Both MSDE and MCPS track the percentage of graduates meeting the USM and CTE course requirements by subgroup, compared to students meeting basic graduation requirements. Appendix I describes the percent of MCPS students meeting the USM and/or CTE course requirements by subgroup from 2007-2010. Table 5-2 on the next page summarizes OLO's analysis of MCPS' college and career program completion data to present information on four key statistics by student subgroup:

- 2010 performance – percent of graduates completing a USM and/or CTE program;
- 2010 performance ratios that describe the relative performance of student subgroups;
- Percent change in the percent of graduates meeting this benchmark from 2007-10; and
- Percent change in the USM/CTE program completion gap by race, ethnicity, and service group from 2007-10.

**Table 5-2: Summary of MCPS Career and College Readiness Measures, 2007-10**  
(USM/CTE Program Completion Rates)

Groups	2010 Performance	2010 Performance Ratio	2007-10 Performance Change	2007-10 Gap Change
All Students	81%	--	4%	--
<b>Students by Race and Ethnicity</b>				
White	85%	--	-2%	--
Asian	83%	97%	-4%	118%
Black	64%	75%	0%	-9%
Latino	64%	75%	6%	-20%
<b>Students by Service Group</b>				
Special Education	48%	60%	-7%	27%
ESOL	44%	55%	8%	1%
FARMS	67%	83%	10%	-17%

An analysis of the data presented in Table 5-2 demonstrates the following:

<sup>25</sup> These include a cumulative grade point average of a C or better, accumulated course credits in English (4 credits), social studies (3 credits), biology and physical sciences (3 credits), mathematics (3 credits), foreign language or advanced technology (2 credits), and a high school diploma.

<sup>26</sup> CTE programs in MCPS are offered across 12 career clusters (e.g. biosciences and medicine, hospitality and tourism) whose course requirements range from four to nine credits.

- **Current Performance Results** – Rates of USM and CTE program completion by MCPS graduates varied by subgroup. In 2010, 83% to 85% of white and Asian graduates meet this benchmark compared to 64% of both black and Latino graduates; and 81% of all MCPS graduates meet this benchmark, compared to 44% to 67% of graduates from the ESOL, FARMS, and special education service groups.
- **Performance Ratios** – In 2010, black and Latino graduates were 75% as likely as white graduates to complete a USM/CTE certified program. Compared to all graduates, graduates who received ESOL, FARMS, or special education services were 55% to 83% as likely to meet this benchmark.
- **Change in Performance Results** – Overall, the percentage of graduates completing a college or career readiness high school program increased 4% between 2007 and 2010. Graduates who were Latino, received ESOL services or FARMS saw the most growth, with increases of 6% to 10% in USM and CTE program completion rates. Alternatively, graduates who were black, white, Asian, or received special education services experienced no growth or lost ground in their career and college readiness completion rates.
- **Change in the Achievement Gap Results** – Between 2007 and 2010, the USM/CTE program completion gap decreased by race, ethnicity, and income; held constant by English proficiency; and increased by special education status. More specifically, the gaps by race, ethnicity, and income saw declines between 9% and 20% while the gap by disability status increased 27%.

## **Chapter VI: Measures Where the Gap Has Widened**

OLO's analysis of district-wide performance data shows that MCPS lost ground in narrowing the achievement gap across four measures: (1) advanced MSA performance, (2) Algebra 1 completion by Grade 8 with a C or higher, (3) AP/IB performance by graduates, and (4) SAT/ACT performance among graduates. Each of these measures reflects above grade-level expectations for student performance that are included in MCPS' *Seven Keys* for Career and College Readiness.<sup>27</sup>

MCPS' difficulty in narrowing the achievement gap for these above grade-level measures is significant because it may portend difficulties in narrowing the achievement gap under the Common Core State Standards (CCSS). As described in the next chapter (Chapter VII), MCPS and other Maryland school systems are scheduled to implement the new PARCC assessments in 2015. These tests will track whether students are reaching the new CCSS benchmarks. The CCSS benchmarks are aligned to both career and college readiness, but they are also more rigorous than the current state curriculum. Chapter VII also notes that the intent of MCPS' implementation of Curriculum 2.0 is for more students to reach these higher standards for student performance under the CCSS.

A summary of student performance data and achievement gap trends for each of these measures follows; more detailed information for each measure is found in Appendices C, F, G, and H.

### **A. Algebra 1 Completion by Grade 8 with a C or Higher**

MCPS has tracked the number of students completing Algebra 1 by Grade 8 as a benchmark of above grade-level performance and college readiness since 2001. Between 2001 and 2010, MCPS tracked the rate of successful completion of Algebra 1 or a higher level mathematics course at the end of Grade 8 for all comprehensive middle schools. During this period, the benchmark for "successful completion of Algebra 1" was grade D or higher. In 2010, when the Seven Keys were adopted, the benchmark for "successful completion of Algebra 1 by Grade 8" was changed to grade C or higher.

Appendix F describes trend data on Algebra 1 by Grade 8 completion with a grade of C or higher by student subgroups from 2010-2012. Table 6-1 summarizes OLO's analysis of this data on four key statistics by student subgroup:

- 2012 performance – percent of 8<sup>th</sup> grade students completing Algebra 1 with a grade of C or higher;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2010-12; and
- Percent change in the achievement gap by race, ethnicity, and service group from 2010-12.

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<sup>27</sup> More specifically, Key 2 is Advanced Reading on the MSAs, Key 4 is Algebra 1 by Grade 8 with a C or higher in the course, Key 6 is graduates earning a qualifying score on at least one AP or IB exam, and Key 7 is graduates earning a score of 1,650 or above on the SAT or a score of 24 or above on the ACT.

**Table 6-1: Summary of MCPS Algebra 1 by Grade 8 Measures, 2010-12**

Groups	2012 Performance	2012 Performance Ratio	2010-12 Performance Change	2010-12 Gap Change
All Students	62%	--	-3%	--
<b>Students by Race and Ethnicity</b>				
White	79%	--	0%	--
Asian	83%	105%	0%	-2%
Black	44%	56%	0%	-1%
Latino	40%	50%	-11%	14%
Multiracial	70%	89%	-4%	39%
<b>Students by Service Group</b>				
Special Education	20%	32%	-17%	7%
ESOL	22%	36%	8%	-7%
FARMS	35%	57%	-9%	7%

An analysis of the data presented in Table 6-1 demonstrates the following:

- **Current Performance Results** - The subgroups' rates of successfully completing Algebra 1 by Grade 8 with a C or better show substantial disparity by race and service status. More specifically, by race, 79-83% of white and Asian 8<sup>th</sup> graders meet this benchmark compared to 40-44% of Latino and black students; by service status, 62% of all 8<sup>th</sup> graders reach this benchmark compared to 20-35% of 8<sup>th</sup> graders receiving FARMS, special education, or ESOL services.
- **Performance Ratios** – In 2012, Latino and black 8<sup>th</sup> grade students were 50-56% as likely as their white peers to reach this benchmark; and, students receiving ESOL, FARMS, or special education services were 32-57% as likely as all students to reach this benchmark.
- **Change in Performance Results** – Between 2010 and 2012, the only subgroup that increased its percentage of 8<sup>th</sup> graders who successfully completed the Algebra 1 benchmark were students receiving ESOL services (they experienced an 8% increase). Conversely, these rates remained unchanged for three groups - white, Asian, and black students; and they declined 9-17% for students who were Latino, received FARMS, or special education services.
- **Change in the Achievement Gap Results** – The progress MCPS has made closing this gap since 2010 varies by subgroup. Specifically, this gap:
  - Diminished between all students and students receiving ESOL services;
  - Remained unchanged between white and black students; and
  - Increased between white and Latino students, and between all students and students receiving special education services and FARMS.

More specifically, the white-Latino gap widened by 14%, and the gap between all students and students with disabilities and students receiving FARMS widened by 7%.

## **B. Advanced MSA Performance**

The Maryland School Assessments (MSAs) in reading, mathematics, and science are used by MSDE to gauge the performance of elementary and middle grade students across the state in these core academic areas. The MSAs are aligned with the Maryland Voluntary Curriculum and are administered to students in Grades 3-8. MSDE uses the MSAs to hold schools and school systems accountable for narrowing the achievement gap; local school systems also use the MSAs to target school improvement efforts. Student performance on the MSAs is scored at three levels:

- **Basic** for students who do not meet grade-level expectations;
- **Proficient** for students who meet grade-level expectations; and
- **Advanced** for students who meet above grade-level expectations.

Proficient MSA scores are the current benchmark of whether students meet performance expectations, while advanced scores on the MSA reflect above grade level expectations for student performance.

Future measures of grade level performance may reflect MSA advanced levels of performance, since the Common Core State Standards-aligned PARCC assessments, scheduled to replace the MSAs in 2014-15, reflect more rigorous standards for college and career readiness than Maryland's current curriculum. As such, advanced MSA score results may portend future achievement results on the PARCC once the CCSS and Curriculum 2.0 within MCPS are fully implemented.

MCPS also includes advanced reading scores on the MSA as a benchmark (i.e. Key 2) among its *Seven Keys to College and Career Readiness*.

MSDE reports MSA scores by student subgroup for each school system and the state as a whole. Appendix C describes trends in advanced MSA scores in reading and mathematics for Grades 3, 5, and 8 from 2007-2012. Tables 6-2 thru 6-4 summarize OLO's analyses of the MSA advanced score data to present information by grade level and student subgroup on four key statistics:

- 2012 performance – percent of students achieving advanced MSA scores in reading and mathematics;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2007-12; and
- Percent change in the achievement gap by race, ethnicity, and service group from 2007-12.

**Table 6-2: Summary of MCPS MSA Advanced Score Measures in Grade 3, 2007-12**

Groups	Advanced Reading Scores				Advanced Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	26%	--	0%	--	44%	--	27%	--
<b>Students by Race and Ethnicity</b>								
White	39%	--	-1%	--	61%	--	23%	--
Asian	39%	99%	7%	-88%	65%	108%	22%	12%
Black	12%	30%	17%	-7%	24%	40%	66%	5%
Latino	10%	26%	20%	-7%	24%	39%	63%	6%
Multiracial	35%	88%	--	--	55%	90%	--	--
<b>Students by Service Group</b>								
Special Ed.	9%	33%	0%	-2%	16%	33%	13%	33%
Regular Ed.	28%	--	-1%	--	47%	--	26%	--
ESOL	5%	16%	0%	14%	16%	31%	92%	21%
English Prof.	32%	--	12%	--	52%	--	37%	--
FARMS	9%	24%	33%	-2%	21%	38%	75%	11%
Non-FARMS	35%	--	5%	--	56%	--	29%	--

**Table 6-3: Summary of MCPS MSA Advanced Score Measures in Grade 5, 2007-12**

Groups	Advanced Reading Scores				Advanced Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	65%	--	45%	--	39%	--	27%	--
<b>Students by Race and Ethnicity</b>								
White	82%	--	30%	--	54%	--	22%	--
Asian	79%	97%	36%	-45%	63%	117%	25%	45%
Black	47%	57%	89%	-8%	18%	33%	75%	6%
Latino	46%	56%	125%	-16%	20%	37%	78%	3%
Multiracial	76%	93%	--	--	48%	90%	--	--
<b>Students by Service Group</b>								
Special Ed.	32%	46%	68%	25%	11%	26%	10%	33%
Regular Ed.	69%	--	42%	--	43%	--	26%	--
ESOL	20%	29%	263%	21%	9%	21%	22%	37%
English Prof.	71%	--	49%	--	43%	--	34%	--
FARMS	40%	52%	135%	-2%	15%	30%	82%	16%
Non-FARMS	77%	--	40%	--	51%	--	30%	--

**Table 6-4: Summary of MCPS MSA Advanced Score Measures in Grade 8, 2007-12**

Groups	Advanced Reading Scores				Advanced Math Scores			
	Performance Measures			2007-12 Gap Change	Performance Measures			2007-12 Gap Change
	2012 Performance	2012 Ratio	2007-12 Change		2012 Performance	2012 Ratio	2007-12 Change	
All Students	56%	--	67%	--	43%	--	17%	--
<b>Students by Race and Ethnicity</b>								
White	74%	--	51%	--	63%	--	21%	--
Asian	74%	99%	61%	-87%	69%	110%	16%	-20%
Black	38%	51%	141%	9%	19%	30%	41%	14%
Latino	34%	46%	174%	9%	18%	28%	35%	16%
Multiracial	65%	87%	--	--	47%	75%	--	--
<b>Students by Service Group</b>								
Special Ed.	20%	34%	119%	44%	11%	24%	20%	14%
Regular Ed.	60%	--	63%	--	46%	--	16%	--
ESOL	11%	19%	124%	56%	14%	31%	13%	19%
English Prof.	58%	--	66%	--	44%	--	17%	--
FARMS	28%	42%	190%	27%	14%	25%	22%	24%
Non-FARMS	68%	--	65%	--	55%	--	24%	--

An analysis of the data presented in Tables 6-2, 6-3, and 6-4 demonstrates the following:

- **Current Performance Results:**

- **Reading** – A majority of 5<sup>th</sup> and 8<sup>th</sup> graders earn advanced MSA scores compared to a quarter of 3<sup>rd</sup> graders. Across each grade, substantial disparity exists between low performing and high performing subgroups. More specifically:
  - In 3<sup>rd</sup> grade, 39% of white and Asian students achieve advanced scores compared to 10-12% of black and Latino students, and 5-9% of service-receiving subgroups met this benchmark compared to 28-35% of non-service subgroups.
  - In 5<sup>th</sup> grade, 79-82% of white and Asian students achieve advanced scores compared to 46-47% of black and Latino students, and 20-40% of students receiving services met this benchmark compared to 69-77% of non-service subgroups.
  - In 8<sup>th</sup> grade, 74% of white and Asian students achieve advanced scores compared to 34-38% of black and Latino students, and 11-28% of students receiving services met this benchmark compared to 58-68% of non-service subgroups.
- **Mathematics** – Across all grade levels, about 40% of all students achieved advanced mathematics scores, but again, there is wide variation among subgroups.
  - In 3<sup>rd</sup> grade, 61-65% of white and Asian students achieve advanced scores compared to 24% of black and Latino students, and 16-21% of service-receiving subgroups met this benchmark compared to 47-56% of non-service subgroups.



- In 5<sup>th</sup> grade, 54-63% of white and Asian students achieve advanced scores compared to 18-20% of black and Latino students, and 9-15% of students receiving services met this benchmark compared to 43-51% of non-service subgroups.
- In 8<sup>th</sup> grade, 63-69% of white and Asian students achieve advanced scores compared to 18-19% of black and Latino students, and 11-14% of students receiving services met this benchmark compared to 44-55% of non-service subgroups.
- **Performance Ratios** – Generally, performance ratios are higher between low and high performing subgroups for advanced reading scores than advanced math scores. For example, across Grades 3, 5, and 8, black and Latino students are 26-57% as likely as their white peers to achieve advanced scores in reading and 28-40% as likely to achieve advanced scores in mathematics. Similarly, students receiving services are 16-46% as likely to as their non-service peers to achieve advanced MSA scores in reading and 24-38% as likely to achieve advanced scores in mathematics.
- **Change in Performance Results** – Except for Grade 3 advanced reading scores, every subgroup achieved gains in advanced MSA scores since 2007. Moreover, many of the lower-performing subgroups made greater percent improvements in their scores. For example, the percentage of black and Latino 5<sup>th</sup> graders earning advanced MSA math scores increased by 75-78% compared to gains of 22-25% among their white and Asian peers. However, as noted in Appendix C (see Tables C-7 and C-10), the higher performing subgroups often achieved greater percentage point increases in their advanced MSA score rates than lower performing subgroups. This is the case for Grade 5 advanced MSA scores where the percentage of black and Latino students reaching this benchmark increased by 8-9 points since 2007, yet the percentage of white and Asian peers meeting this same benchmark increased by 10-13 points.
- **Change in the Achievement Gap Results** – Except for Grade 3 and 5 advanced reading scores, the gaps for the advanced MSA scores widened by race and ethnicity. Moreover, for every measure except advanced Grade 3 reading, the gaps also widened by service group status. The increase in the advanced MSA gap ranged from 5-16% by race and ethnicity, depending on the grade level and subject matter, while the increase in the gap by service group ranged from 11-56%.

### **C. AP/IB Performance among Graduates**

Advanced Placement (AP) and International Baccalaureate (IB) programs allow students to complete college-level courses while they are in high school. High school graduates can often use qualifying AP exam scores (3 or higher) and IB exam scores (4 or higher) to earn college credit or advanced placement status upon entry to college.

Since 2000, MCPS has tracked the number of students taking AP exams as a measure of college readiness. MCPS also uses this measure to monitor its progress on meeting its strategic goals. With more IB programs, MCPS has also tracked student performance among these graduates since 2005. Along with AP performance measures, IB performance measures are part of MCPS' *Seven Keys*.

Appendix G describes trend data on the percentage of MCPS graduates earning a score of 3 or higher on an AP exam or a score of 4 or higher on an IB exam since 2007. Table 6-5 on the next page summarizes OLO's analysis of AP/IB performance data on four key statistics by student subgroup:

- 2012 performance – percent of graduates earning qualifying AP/IB scores;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in performance from 2007-12; and
- Percent change in the AP/IB achievement gap among graduates by race, ethnicity, and service group from 2007-12.

**Table 6-5: Summary of MCPS AP/IB Measures, 2007-12**

Groups	2012 Performance	2012 Performance Ratio	2007-12 Performance Change	2007-12 Gap Change
All Students	53%	--	14%	--
<b>Students by Race and Ethnicity</b>				
White	70%	--	20%	--
Asian	72%	103%	17%	-35%
Black	25%	35%	26%	17%
Latino	40%	57%	10%	37%
Multiracial	58%	83%	--	--
<b>Students by Service Group</b>				
Special Education	16%	30%	38%	6%
ESOL	30%	56%	11%	17%
FARMS	26%	49%	4%	26%

An analysis of the data presented in Table 6-5 demonstrates the following:

- **Current Performance Results** – In 2012, a majority (53%) of MCPS graduates earned a qualifying score on at least one AP or IB exam; however, the data shows considerable variation by subgroup. Specifically, while 70-72% of white and Asian graduates met this benchmark, only 25-40% of black and Latino graduates and 16-30% of graduates receiving ESOL, FARMS, or special education services did so.
- **Performance Ratios** – The relative performance of lower performing subgroups to higher performing peers varied by race, ethnicity, and service subgroups. For example, black graduates were 35% as likely as white graduates to earn a qualifying AP/IB exam score compared to Latino graduates who were 57% as likely to do so; graduates who received special education services were 30% as likely as all students to meet this benchmark compared to 49% of graduates who received FARMS and 56% who received ESOL services.
- **Change in Performance Results** – The percent of MCPS graduates who reached this benchmark has increased 14% since 2007. Further, each subgroup saw progress, ranging from an increase of 4% among graduates who receive FARMS to an increase of 38% among graduates with disabilities.
- **Change in the Achievement Gap Results** - The data show gaps in AP/IB performance among graduates widened by race, ethnicity, and service status subgroups, with increases ranging from 6-37%.

## D. SAT/ACT Performance among Graduates

Since 2006, MCPS has tracked the participation and performance of MCPS graduates on the “new” SAT comprised of three subtests: critical reading, mathematics, and writing. Based on research about factors that support college completion, MCPS identifies a combined SAT score of 1,650 as a measure of student readiness for college-level work. In 2010, MCPS began tracking the performance of graduates earning a score of 24 or above on the ACT as another measure of college readiness. MCPS’ *Seven Keys to College and Career Readiness* also includes SAT scores of 1,650 or above and/or ACT scores of 24 and above as a benchmark of college readiness (i.e. Key 7).

MCPS typically reports both the percent of graduates who take the SAT/ACT and the percentage of test takers who score 1,650 or higher on the SAT or 24 or higher on the ACT. To be consistent with other measures of college readiness monitored by MCPS, such as AP and IB performance, data describing the percentage of *graduates* that meet this benchmark rather than the percentage of *test takers* offers more meaningful information on the college readiness of MCPS graduates. OLO calculates this metric using SAT/ACT participation and performance data reported by MCPS.<sup>28</sup>

Appendix H describes three years of trend data by subgroup for SAT/ACT performance among graduates for 2010-12. Table 6-6 summarizes OLO’s analysis of MCPS’ SAT/ACT performance data for four key statistics listed below:

- 2012 performance – the percentages of graduates meeting the Key 7 benchmark;
- 2012 performance ratios that describe the relative performance of student subgroups;
- Percent change in SAT/ACT performance among graduates from 2010-12; and
- Percent change in the SAT/ACT gap by race, ethnicity, and service group from 2010-12.

**Table 6-6: Summary of MCPS SAT/ACT Measures, 2010-12**

Groups	2012 Performance	2012 Performance Ratio	2010-12 Performance Change	2010-12 Gap Change
All Students	41%	--	4%	--
<b>Subgroups by Race and Ethnicity</b>				
White	63%	--	5%	--
Asian	62%	99%	9%	-70%
Black	14%	22%	15%	3%
Latino	16%	25%	12%	3%
Multiracial	61%	98%	30%	-88%
<b>Subgroups by Service Group</b>				
Special Education	12%	29%	19%	-1%
ESOL	4%	9%	102%	-1%
FARMS	8%	20%	-3%	6%

An analysis of the data presented in Table 6-6 demonstrates the following:

<sup>28</sup> SAT/ACT performance among graduates equals SAT/ACT participation rate multiplied by the percentage of test takers reaching the 1,650 or above benchmark on the SAT or 24 or above benchmark on the ACT.

- **Current Performance Results** – The 2012 performance on the SAT and ACT shows that 41% of all MCPS graduates met the Key 7 benchmark. Among those who met this benchmark, the shares of college-ready white, Asian, and multi-race graduates ranged from 61-63% compared to 14-16% of black and Latino graduates meeting this benchmark and 4-12% of service group benchmarks meeting this benchmark.
- **Performance Ratios** – Black and Latino graduates in the Class of 2012 were only 22-25% as likely as white graduates to earn SAT scores of 1,650 or higher or ACT scores of 24 or higher. Similarly, members of the Class of 2012 who received ESOL, special education, or FARMS were only 9-29% as likely as all graduates to reach either benchmark.
- **Change in Performance Results** – Since 2010, the percentage of MCPS graduates meeting the SAT/ACT performance benchmark increased by 4%. Moreover, every subgroup experienced gains in their percentages of students meeting this benchmark except among students receiving FARMS. The largest percent changes in performance occurred among English language learners, students with disabilities, multiracial students, and black students.
- **Change in the Achievement Gap Results** – Between 2010 and 2012, the data show that the SAT/ACT performance gap has held constant by special education and ESOL status, but increased by 3-6% by race, ethnicity, and income. Of note, the greater growth in black and Latino students (12%-15%) reaching the Key 7 benchmark compared to white students (5%) suggests that the white-black and white-Latino gaps on this measure should have narrowed. However, as noted in Appendix H, both the white-black and white-Latino gaps in SAT/ACT performance increased because white students made a larger point gains in their percentage of students meeting this benchmark (3.1 percentage points) compared to black and Latino students (who made 1.7 and 1.8 percentage point increases).

## **Chapter VII: The Policy Context for Narrowing the Achievement Gap**

In 2002, the No Child Left Behind and Bridge to Excellence Acts were enacted, which directed local school systems to achieve educational proficiency for all children, regardless of their race, ethnicity, language, disabilities or income status, by 2014. Locally, these initiatives joined “*Our Call to Action*” the strategic plan adopted by the Montgomery County Public Schools (MCPS) Board of Education three years earlier that envisioned “Success for Every Student.”

The achievement goals developed by the state under the Bridge to Excellence Act to comply with the federal No Child Left Behind requirements mostly aligned with local MCPS policies. However, other MCPS policies, namely those focused on above-grade level proficiency measures, exceeded state and federal standards, positioning the Board of Education to pursue an even more ambitious policy agenda than its federal or state counterparts.

Since 2008, significant changes to federal and state policy have weakened the imperatives for closing the achievement gap while simultaneously raising academic achievement goals. Locally, new above-grade achievement standards have further shifted MCPS’ emphasis toward college readiness as the benchmark of school success rather than grade level proficiency. This chapter describes these changes and explains how they impact MCPS’ efforts in three parts:

- A. Key Local Policies** describes MCPS’ strategic goals and current targets for narrowing the achievement gap.
- B. Key Federal Policies and State Policies** describes key components of the No Child Left Behind (NCLB) and Bridge to Excellence Acts - both aimed at narrowing the achievement gap – as well as Maryland’s recent NCLB/ESEA Waiver.
- C. Relevant Federal and State Policy Changes** describes Race to the Top (RtTT), the Common Core State Standards (CCSS), and proposed changes in Maryland aimed at reducing disparities in suspension rates by student ethnicity and disability status.

The policies reviewed in this chapter offer four key findings:

- MCPS’ strategic goals and targets for narrowing the achievement gap continue to exceed federal and state level requirements.
- The ESEA waiver process undertaken by Maryland and other states weakens NCLB’s commitment to eliminating the achievement gap.
- The higher student performance expectations embedded in the Common Core State Standards endorsed by the federal government ignore the reality that local school systems have yet to close the achievement gap on their current, less rigorous student performance measures of grade level proficiency.
- Federal regulations that change the definitions of student subgroups by race and ethnicity and measures of graduation and dropout have made it more difficult for local school systems to track their long term progress in closing the achievement gap.

## A. Key Local Policies

**Our Call to Action (OCA).** MCPS’ efforts to narrow the achievement gap preceded both federal and state efforts to address the achievement gap. Since 1999, MCPS’ own strategic plan, aimed at improving the academic performance of all students and narrowing the achievement gap among student subgroups, has focused on five broad goals:

- Ensure success for every student;
- Provide an effective instructional program;
- Strengthen productive partnerships for education;
- Create a positive work environment in a self-renewing organization; and
- Provide high-quality business services essential to the educational success of students.

As part of its strategic plan, MCPS has developed and annually tracked its performance on milestones aligned to each of its strategic goals. Among MCPS’ five strategic goals, the first two – “ensure success for every student” and “provide an effective instructional program” – align most closely with the overall goals of improving student performance and narrowing the achievement gap. Table 7-1 provides a summary of the milestones for monitoring OCA’s Goals 1 and 2 and a description of whether each milestone meets or exceeds state requirement for student performance.

**Table 7-1: MCPS’ Our Call to Action Goals for Student Performance**

Milestones	Meets/Exceed State Mandates?
<b>Goal 1: Ensure Success for Every Student</b>	
• All students will achieve or exceed proficiency standards on local and state assessments	Meets
• All students will complete Algebra 1 by Grade 9 and Geometry by Grade 10 with a Grade of C or higher	Exceeds
• All students will complete Algebra 2 by Grade 11 with a C or higher	Exceeds
• All schools will increase participation and performance of all students taking SAT/ACT	Exceeds
• All schools will eliminate the disproportionate suspension rates of black and Latino students and students with disabilities	Meets
• All students will be educated in learning environments that are safe, drug-free, and conducive to learning	Meets
• All schools will meet or exceed the state’s graduation requirement	Meets
• All graduates will be prepared for postsecondary education and employment	Exceeds
<b>Goal 2: Provide an Effective Instructional Program</b>	
• All students will meet or exceed standards in reading and mathematics by the end of Grade 2	Exceeds
• All schools will increase enrollment and participation in gifted, Honors, AP, IB, and other college-level courses	Exceeds
• MCPS will eliminate the disproportionate representation of black and Latino students in special education	Meets
• All schools will provide students with disabilities access to the general education environment to the maximum extent appropriate	Meets
• All schools will achieve or exceed local and state standards for attendance	Meets

As noted in Table 7-1, several of *Our Call to Actions*' specific goals that address on-grade level measures **align** with state policies aimed at narrowing the achievement gap. Since Maryland set several of its goals to align with federal standards, we note that many of MCPS' targets align with federal policy goals as well. For example, *Our Call to Action* strives to narrow the achievement gap for proficiency on state assessments of mathematics and reading literacy which is also a federal policy goal under No Child Left Behind.

Additionally, other MCPS goals for closing the achievement gap focused on narrowing the achievement gap on above-grade level measures of student performance **exceed** federal and state mandates.<sup>29</sup> As noted in Table 7-1, six of the 13 goals for student performance in *Our Call to Action* exceed state mandates for performance.

Finally, the *Seven Keys to College* initiative further exemplifies MCPS' focus on narrowing the achievement gap by race and ethnicity on above-grade level measures. Adopted in 2009 and embedded into *Our Call to Action*, the *Seven Keys* describe seven measures of above-grade level performance measures that students should master to be "college and career" ready as graduates. Table 7-2 describes these measures.

**Table 7-2: MCPS' Seven Keys to College and Career Readiness**

Seven Keys	Data Points
<b>1. Advanced Reading K-2</b>	MCPS Assessment in Primary Reading; Terra Nova 2 in Grade 2
<b>2. Advanced Reading MSA</b>	Advanced Scores on Maryland School Assessments (MSA)
<b>3. Advanced Math by Grade 5</b>	Advanced Mathematics in Grade 5 Proficiency
<b>4. Algebra 1 by Grade 8</b>	Algebra 1 Completion with a Grade C or higher by end of Grade 8
<b>5. Algebra 2 by Grade 11</b>	Algebra 2 Completion with a Grade C or higher by end of Grade 11
<b>6. 3 on AP or 4 on IB</b>	AP/IB Participation and Performance
<b>7. 1,650 on SAT or 24 on ACT</b>	SAT/ACT Participation and Performance

Finally, MCPS monitors its performance on its strategic goals via its *Annual Reports on Our Call to Action* and its *Results Books* that track subgroup performance by race, ethnicity, and service group on the *Seven Keys*.<sup>30</sup> These publications are used by the Board of Education and MCPS staff to track the school system's performance and to initiate discussions and program changes that enable MCPS to reach its strategic goals. MCPS staff report that its own strategic plan, more so than federal or state policy mandates, drives the school system's efforts to narrow the achievement gap.<sup>31</sup>

## **B. Key Federal and State Policies**

Three key federal and state policy drivers that shape MCPS' efforts to narrow the achievement gap are described in this section: (1) the No Child Left Behind Act (NCLB) of 2002; (2) Bridge to Excellence Act; and (3) Maryland ESEA/NCLB Waiver.

<sup>29</sup> For more details, see OLO Report 2008-2.

<sup>30</sup> The 2012 Results Book, however, does not track student progress by service group <http://www.montgomeryschoolsmd.org/uploadedFiles/about/MCPSResultsBook.pdf>.

<sup>31</sup> Meeting with Stephanie Williams, MCPS Director of Policy, October 24, 2012

## **1. No Child Left Behind Act (NCLB)**

The federal thrust for states and local school systems to narrow the achievement gap by ethnicity and service group was codified in the reauthorization of the Elementary and Secondary Education Act (ESEA) in 2002 as the No Child Left Behind (NCLB) Act. NCLB's focus on closing the achievement gap reflected a belief that public schools could help build a more equitable society by ensuring that all children achieved high academic standards that in turn met the nation's economic interests to have a highly educated workforce. As enacted, NCLB required states to:

- Ensure that all student subgroups<sup>32</sup> achieve proficiency on grade-level measures in reading and mathematics by the end of the 2013-14 school year; and
- Address the gaps in educational performance “between high- and low-performing children, especially the achievement gaps between minority and non-minority students, and between disadvantaged children and their more advantaged peers.”<sup>33</sup>

As noted in OLO Report 2008-2, NCLB required states and districts to implement three systems:

- An assessment system of standardized proficiency measures. States established standards for core subject areas and developed systems to test students' reading and math proficiency annually in grades 3-8 and once in high school, and also tested science proficiency at least once in elementary, middle, and high school.
- A system of school performance targets and educational strategies to ensure academic progress for all students to meet the federal goal of “proficiency” in assessed content areas by the end of the 2013-14 school year. Each state established annual adequate yearly progress (AYP) percentage targets and required schools to meet these targets for all students and for each student subgroup. States were required to raise these targets at regular intervals until 2014, when 100 percent of all subgroups were expected to have reached proficiency.
- A system of consequences for Title I schools (and the districts) that failed to meet AYP targets. For example, if a school failed to meet AYP targets for two years in a row, NCLB required districts to provide a school transfer option; if a school failed for three years, the district provided supplemental education services (i.e. tutoring).

According to the Center for Education Policy, within a four-year period (from 2006-07 to 2010-11), the share of all Maryland public schools MSDE identified as ‘in need of improvement’ (both Title I and non-Title I) roughly tripled from 16 percent to 45 percent.<sup>34</sup>

In 2011, 31 MCPS schools (representing 15 percent of all MCPS schools) were categorized as ‘in need of improvement’ based on MSDE's differentiated accountability pilot program. Established in 2008, MSDE's pilot program created two pathways to differentiate schools in improvement by the number of student subgroups that missed the annual AYP targets. Specifically:

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<sup>32</sup> In 2002, subgroups for accountability by race and ethnicity were white, black, Latino, Asian, and Native American students; by service group, they were students with disabilities, English language learners, and low-income students.

<sup>33</sup> Section 1001(3) of Title I of NCLB.

<sup>34</sup> See Usher, AYP Results for 2010-11, December 2011 at Center for Education Policy ([www.cep-dc.org](http://www.cep-dc.org))



- **Focused Pathway** schools missed annual AYP targets for up to two student subgroups;
- **Comprehensive Pathway** schools missed their annual AYP targets either for All Students or for three or more student subgroups.

MSDE's program also differentiated schools 'in improvement' for less than five years (**Developing Stage**) from those 'in improvement' for five years or more (**Priority Stage**). The distribution of schools across the resulting four quadrants shows the breadth and depth of resource needs. Table 7-3 shows the classification of the 31 MCPS schools in improvement across these four quadrants.

**Table 7-3: MCPS Schools in Improvement, 2011**

<b>Stages and Pathways of Improvement</b>	<b>Focus Pathway – Missed AYP for Two or Less Subgroups</b>	<b>Comprehensive Pathway – Missed AYP for All Students or Three or more Subgroups</b>
<b>Developing Stage of Improvement –</b> Four or fewer years of not achieving AYP	<b>Elementary Schools:</b> Burning Tree Mill Creek Towne South Lake  <b>Middle Schools:</b> Gaithersburg Newport Mill  <b>High Schools:</b> Clarksburg Col. Zadok Magruder Gateway to College Sherwood	<b>Elementary Schools:</b> Cannon Road Galway Sargent Shriver Captain James E. Daly Kemp Mill Watkins Mill  <b>Middle Schools:</b> A. Mario Loiederman Benjamin Banneker Eastern Martin Luther King Jr. Ridgeview White Oak Argyle Col. E. Brooke Lee Francis Scott Key Montgomery Village Roberto W. Clemente  <b>High Schools:</b> Gaithersburg Northwood John F. Kennedy
<b>Priority Stage of Improvement –</b> Five or more years of not achieving AYP	<b>Middle Schools:</b> Forest Oak	<b>Middle Schools:</b> Neelsville

Source: MSDE, Maryland Report Card

## 2. Bridge to Excellence Act

The state Bridge to Excellence Act of 2002 codified the goals of NCLB into Maryland law and expanded state aid for public education. Like NCLB, Bridge to Excellence requires Maryland's 24 school systems to demonstrate that:

- All student subgroups reach high standards;
- All English language learners become proficient in English; and
- All students are taught by highly qualified teachers in safe, drug-free environments.

To meet another academic content measure for AYP at the high school level, MSDE requires that Maryland schools graduate 90 percent of all students by 2013-14. The Bridge to Excellence Act established additional requirements that MCPS and other districts in Maryland must meet. For example, each district must:

- Submit a master plan that describes how it intends to implement Bridge to Excellence;
- Provide annual master plan updates to report their progress;
- Beginning with the Class of 2009, require every student to take and pass each High School Assessment or meet alternative requirements in order to graduate; and
- By the 2007-08 school year, provide full-day Kindergarten classes for all students and pre-K classes for low-income four-year olds.

MSDE refers to Bridge to Excellence as its “second wave of school reform” that included adoption of the Voluntary State Curriculum, the consolidation of early childhood education programs with MSDE, and the establishment of Maryland School Assessments (MSA) and High School Assessments (HSA).<sup>35</sup>

Maryland’s first wave of school reform under the 1989 Sondheim Commission Report focused on instituting the Maryland School Performance Assessment Program (MSPAP) to help make the state’s education standards more rigorous. During the “second wave of school reform,” these standards were replaced by the MSA and HSA. According to MSDE, two recent initiatives – Race to the Top and the NCLB Waiver – represent the “third wave of school reform” in Maryland. The NCLB Waiver is described in the next section; a description of Race to the Top (RtT) begins on page 54.

### **3. Maryland ESEA/NCLB Waiver**

Although NCLB was scheduled for reauthorization in 2007, it has languished in Congress. This delay, a growing number of public schools identified as ‘in need of improvement’, and the economic downturn set the stage for the U.S. Department of Education to initiate sweeping changes in federal education policy without Congressional oversight.<sup>36</sup> These changes were achieved via the Race to the Top Program (RtTT) and the ESEA Flexibility Program (i.e. NCLB Waiver).

In the absence of a reauthorized law, in late 2011 the U.S. Department of Education began to offer states ESEA waivers to key NCLB provisions. In place of the mandate that states demonstrate proficiency among all student groups by 2014, the ESEA waiver permits states to:

- Extend the deadline to narrow the achievement gap by three years to 2017;
- Reduce the size of the gap to be closed by half;
- Redesign their accountability systems;
- Lower the percentage of schools identified as in need of improvement; and
- Avoid the requirement to offer school choice or supplemental educational services (tutoring) as consequences of school improvement.

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<sup>35</sup> Preparing World Class Students: Maryland’s Plan for Education Reform, 2012 – p. 4.  
[http://www.marylandpublicschools.org/NR/rdonlyres/520780D1-353D-4369-81A2-A751350E66E3/32402/EdReformBroch\\_05232012\\_.pdf](http://www.marylandpublicschools.org/NR/rdonlyres/520780D1-353D-4369-81A2-A751350E66E3/32402/EdReformBroch_05232012_.pdf)

<sup>36</sup> According to the Center on Education Policy (Usher, 2011), nearly half (48%) of the nation’s schools failed to make AYP in 2010-11.

The criteria the Department of Education used to award NCLB waivers aligned with the criteria used to grant RtTT awards, and consisted of: (1) implementing higher standards (i.e. CCSS); (2) using student test scores in teacher and principal evaluations. More than 39 states plus the District of Columbia and Puerto Rico have applied or indicated that they would apply for an NCLB waiver.<sup>37</sup> To date, 33 states and the District of Columbia have been granted such waivers, including Maryland.

Maryland's ESEA waiver has led to the following changes in Maryland schools:<sup>38</sup>

- The Maryland School Performance/Progress Index replaces the NCLB School Improvement Process, effective this 2012-13 school year.
- Instead of 45 percent of Maryland public schools being identified as 'in need of improvement' based on AYP in 2010-11,<sup>39</sup> five percent of the lowest performing schools statewide will be identified as "priority schools" and be eligible for increased oversight and resources, while another 10 percent of the lowest performing schools will be identified as "focus schools" in need of staff development.
- MSDE sets each school's "annual measurable objectives" (AMO) that reduce by half the percentage of students who do not reach proficiency through 2017. AMO goals can vary by school and by subgroup.
- Beginning in 2014-15, MSDE expects to use a new assessment - Partnership for Assessments of Readiness for College and Careers - aligned to the new curriculum reflecting the CCSS.

Table 7-4 describes the factors that the Maryland School Progress Index will use to identify schools targeted for school improvement.

**Table 7-4: Maryland School Progress Index**

Measurement Type	Measures by Grade Span	
	Grades 3-8	Grades 9-12
<b>Achievement (30%)</b> <i>Meeting AMO performance targets</i>	MSA Math Proficiency (33%) MSA Reading Proficiency (33%) MSA Science Proficiency (33%)	HSA Algebra Proficiency (33%) HSA English Proficiency (33%) HSA Biology Proficiency (33%)
<b>Gap Reduction (40%)</b> <i>Gap reduced between the lowest and highest subgroup within a school</i>	MSA Math Proficiency (33%) MSA Reading Proficiency (33%) MSA Science Proficiency (33%)	HSA Algebra Proficiency (20%) HSA English Proficiency (20%) HSA Biology Proficiency (20%) Cohort Graduation Rate (20%) Cohort Dropout Rate (20%)
<b>Growth for Grades 3-8 (30%) or College and Career Readiness for Grades 9-12 (30%)</b>	% of students making one or more year's growth on the Math MSA (50%) % of students making one or more year's growth on the Reading MSA (50%)	Cohort Graduation Rate (60%) College and Career Preparation (40%) - AP or IB Performance - CTE Concentrators - College Enrollment

Source: MSDE ESEA Waiver Application, p. 76

<sup>37</sup> Usher, 2011

<sup>38</sup> Baltimore City Public Schools, Fact Sheet on ESEA Waiver, 2012

<sup>39</sup> Usher, 2011

Previously, reducing the achievement gap was the sole focus of AYP, as defined by all students meeting the same benchmarks, and accounted for 100 percent of the factors used to determine whether a school achieved AYP. Under Maryland's new accountability system, closing the achievement gap will now account for no more than 40 percent of the factors that determine whether a school achieves its annual measurable goals.

The new system also changes the characterization of MCPS' underperforming schools. Instead of 31 MCPS schools identified as 'in need of improvement' in 2011, only two MCPS elementary schools are identified as "focus schools," as they are in the group of five to fifteen percent of the lowest performing schools across the state: Brookhaven and Kemp Mill.<sup>40</sup> (MCPS has no priority schools, i.e., schools that are among the lowest performing five percent of Maryland schools.)

**Performance Expectations:** Twenty six of the 34 states that received NCLB waivers have set different annual measurable objectives (AMOs) by subgroups to cut the achievement gap in half by 2017; only eight continue to set the same targets for all students.<sup>41</sup>

MSDE's ESEA waiver application indicates that it will set different expectations for student performance by subgroup (see Appendix L). For example:

- MSDE's 2017 proficiency target for reading is 84% and 87% for black and Latino students, respectively, compared to 95% and 97% for white and Asian students.
- Similarly, MSDE's 2020 cohort graduation rate goal is 83% and 85% for Latino and black students, compared to 92% and 94% for white and Asian students, despite setting a common goal in 2011 of achieving a 95% cohort graduation rate for each subgroup.<sup>42</sup>

Of note, there has been a backlash in Florida and Virginia against their state departments of education setting differential achievement goals.<sup>43</sup> In response, Virginia re-wrote its AMOs to institute common goals by subgroup, similar to AYP. As the public becomes aware of Maryland's plans to set differential achievement goals, public criticism against MSDE could mount, as well.

Table 7-5 on the next page describes the key differences between NCLB and the ESEA waiver. It remains unclear which of these changes will persist once ESEA is reauthorized.

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<sup>40</sup> See MSDE NCLB Waiver Application, p. 130

<sup>41</sup> See Alvarez, Florida Officials Defend Racial and Ethnic Learning Goals, New York Times, October 17, 2012 [http://www.nytimes.com/2012/10/18/education/florida-officials-defend-racial-and-ethnic-learning-goals.html?\\_r=0](http://www.nytimes.com/2012/10/18/education/florida-officials-defend-racial-and-ethnic-learning-goals.html?_r=0)

<sup>42</sup> Maryland's Consolidated State Application, 2011.

<sup>43</sup> See for example, [http://blogs.edweek.org/edweek/campaign-k-12/2012/08/this\\_is\\_not\\_what.html](http://blogs.edweek.org/edweek/campaign-k-12/2012/08/this_is_not_what.html).

**Table 7-5: Key Differences between NCLB and ESEA Waiver**

Key Features	NCLB Features	NCLB Waiver Features
Core Content Standards	Reading, mathematics and science standards determined by states to reflect grade level expectations	Requires adoption of Common Core State Standards (CCSS) to reflect expectations for Career and College Readiness
Assessments	Based on state standards in grades 3-8, plus high school in core content areas.	Science assessments used to determine annual progress; assessment tied to CCSS after 2014 – e.g. Partnership for Assessments of Readiness for College and Careers (PARCC)
Achievement Gap	Requires states to close the achievement gap on proficiency measures by 2014	Requires states to narrow by half the achievement gap between highest and lowest performing subgroups by 2017
Performance Expectations	Requires states to reach common AYP targets for each subgroup annually	Allows states to set different AMO goals by school and subgroup annually
Accountability (Consequences for Failure)	School improvement for all systems failing to achieve AYP, including school choice and tutoring for students in low performing schools	Consequences limited to the lowest performing 15% of schools not meeting AMO goals; school choice and tutoring provisions eliminated (See footnote 45 description of new system)
Reporting System	States required to report on a range of information to monitor the achievement gap by subgroup, district, and school	Allows states to set up ranking systems based on new accountability models <sup>44</sup> – not clear if the reporting system will enable tracking on the gap

### C. Relevant Federal and State Policy Changes

The following four sets of relevant federal and state policy changes since 2007 are described below:

- Federal race and ethnicity reporting requirements enacted in 2010;
- Federal data requirements for graduation, dropout, and student privacy enacted in 2011;
- Race to the Top (RtTT) and Common Core Standards (CCSS); and
- Maryland’s proposed suspension regulations

#### 1. Federal Race and Ethnicity Reporting Requirements

NCLB requires local and state educational agencies to report academic progress among subgroups of students that include subgroups by race and ethnicity. Through 2009, federal guidelines required public school systems to collect and report data on race and ethnicity across five categories:

- Black or African American
- American Indian or Alaska Native
- Asian (including Pacific Islanders)
- Hispanic/Latino; or
- White

<sup>44</sup> MSDE has adopted this approach by developing a framework for providing differentiated supports and monitoring to schools based on their School Progress Index rankings. Strand 1 and 2 schools where most students meet or exceed annual standards may be randomly sampled by MSDE to ensure that their school improvement plans meet the needs of their student subgroups. Strand 3 through 5 schools that usually miss their AMO’s across several subgroups, will receive additional supports and oversight from their school districts and the state as warranted.

Beginning in 2010, public school systems implemented three major changes to their procedures for collecting race and ethnicity data to comply with new federal guidelines issued in 2008:

- A new, two-part question on ethnicity and race that replaced the previous one-part question;
- Two new categories – “Asian” and “Native Hawaiian or Other Pacific Islander” replaced the racial category “Asian or Pacific Islander;” and
- An option for individuals to select one or more races from each of the six racial groups replaced the option to select one or more races as a separate category.

These changes reset the race and ethnicity baseline data that school systems had used since 2002 to monitor changes to the achievement gap on federal, state, and local measures. As a result, the capacity to report longitudinal data beyond 2010 is limited, as the underlying pools of students who categorize themselves by race and ethnicity has technically shifted, albeit slightly.

To illustrate the effect of these changes, Table 7-6 compares the distributions of MCPS student classifications by race and ethnicity under the old and new guidelines based on 2010 data. The MCPS data show slightly higher percentages of students identified as Latino or from two or more races, as well as corresponding declines in the percentages of students identified as black, Asian, and white under the new system. However, trend data by race and ethnicity from 2007 to 2012 is reported on several measures for this study to gauge MCPS’ progress in narrowing the gap.

**Table 7-6: MCPS Distribution of Students by Race and Ethnicity, 2009-10**

<b>Race and Ethnicity Categories</b>	<b>Old Codes</b>	<b>New Codes</b>	<b>Point Change</b>
Black or African American	23.4%	21.3%	-2.3%
American Indian or Alaska Native	0.3%	0.2%	-0.1%
Asian or Pacific Islander*	15.8%	14.3%	-1.5%
Hispanic/Latino	23.4%	25.1%	+1.7%
White	37.2%	34.8%	-2.4%
Two or More Races	n/a	4.2%	
Native Hawaiian or Other Pacific Islander	n/a	0.1%	
* Under new codes, this category is limited to Asians who are not Pacific Islanders Source: MCPS, April 2011			

## **2. Federal Data Requirements for Graduation, Dropout, and Student Privacy**

In 2008, the U.S. Department of Education issued new NCLB regulations that required states to:

- Report graduation rates disaggregated by subgroup; and
- Set graduation rate goals for meeting AYP.

These federal regulations mandated that states adopt a common approach to calculating graduation rates. The new calculation tracks the number of students who graduate on-time (i.e. within four years) but excludes students who completed a GED or modified diploma/certificate among on-time graduates. This new reporting requirement is referred to as the “adjusted cohort graduation rate.”

Previously, states could use and track a variety of measures to describe their graduation trends. Many states, including Maryland, used the leaver rate developed by the National Center for Education Statistics to compile their graduation data. The leaver rate compared the number of graduates to the number of students who either graduated or dropped out of the school over a prior four-year period to calculate a graduation rate. Unlike the cohort rate, the leaver rate included every student who graduated in a given year, not just those who had entered school within the past four years. As such, the leaver rate captured “any time” graduates rather than “on-time” graduates.

Table 7-7 uses MSDE data for the Class of 2010 to compare the statewide leaver graduation rate to the statewide four-year adjusted cohort graduation rate. Since the cohort rate excludes graduates who took more than four years to graduate, the calculation reduces Maryland’s overall graduation rate from 90% to 86%.

**Table 7-7: Maryland Statewide Graduation Rates, Class of 2010**

Graduation Measures	Graduation Rate	Summary of Component Measure
Leaver Rate (NCES)	90.01%	2010 Maryland Graduates/(2010 Graduates + 2010 Grade 12 dropouts + 2009 Grade 11 dropouts + 2008 Grade 10 dropouts + 2007 Grade 9 dropouts)
4-Year Adjusted Cohort Rate	86.15%	2010 Maryland Graduates beginning grade 9 fall 2006/(2006-07 Grade 9 entrants + additional entrants through 2010 – transfer outs – deaths)

Source: Maryland Report Card

Federal regulations also required each state to implement a uniform dropout rate that measures the cumulative percentage of students within a four-year cohort who drop out across all of their high school years. Previously, MSDE and most other states had used an “annual event” measure that tracked the percentage of high school students who dropped out in any one year, rather than a cohort measure that captured dropout rates by class across a four-year span.

As Table 7-8 shows, the statewide four-year adjusted cohort dropout rate for the Class of 2010 was 7.35%, an increase of nearly 5 percentage points over the annual event rate at 2.54%.

**Table 7-8: Maryland Dropout Rates, 2009-10**

Dropout Measures	Dropout Rates	Summary Definitions
Grade 9-12 (Event Rate)	2.54%	The total number of dropout events during the 2009-2010 school year in grades 9-12/2009-10 grades 9-12 enrollment
4-Year Adjusted Cohort Rate	7.35%	The total number of individual students in 4-year cohorts who dropped out from Fall 2006 to Spring 2010/2009-2010 students graduating high school

Source: Maryland Report Card

Federal regulations required states to re-set their baseline in 2011 for graduation and dropout rates. MSDE first published the new high school cohort graduation and dropout rates in 2011 for the Class of 2010 and in 2012 for the Class of 2011. Cohort dropout and graduation rate data for the Class of 2012 will not be available until June 2013, in part because MSDE has decided to track both 4-year and 5-year cohort data on dropout and graduation rates.

Finally, new federal data requirements to protect student privacy require states to suppress the reporting of any data points by subgroup below three percent, including annual dropout rates by subgroup, and any data points above 95 percent by subgroup, including graduation rates.<sup>45</sup> To comply with these requirements, MSDE will no longer report these data.

### **3. Race to the Top (RtTT) and Common Core State Standards (CCSS)**

Race to the Top (RtTT) refers to the \$4 billion federal program funded as part of the American Recovery and Reinvestment Act of 2009. During the second round of RtTT competition, Maryland was awarded \$250 million. States applying to RtTT agreed to four assurances:

- Tying teacher and principal evaluations to student test scores;
- Promoting charter schools;
- Adopting the Common Core State Standards; and
- Implementing statewide data systems.

Before applying for RtTT, many states, including Maryland, changed existing education policies to make their applications competitive. For example, Maryland adopted the Common Core State Standards in 2010 and committed to developing a new teacher and principal evaluation system where student performance on standardized tests accounts for 50 percent of each educator's evaluation. Because the Montgomery County Board of Education did not endorse this provision or Maryland's RtTT application, it is not required to meet this provision but it must develop a teacher evaluation framework that utilizes student growth in a significant way. What this means, however, has not been finalized since MSDE recently rejected MCPS' teacher evaluation proposal.

Additional changes in state law the Maryland legislature enacted in 2010 under Education Reform Act (House Bill 1263) to make Maryland's RtTT application more competitive, included:

- Extending the probationary period for non-tenured teachers from two to three years;
- Requiring annual evaluations for non-tenured teachers and mentors for candidates at risk for not qualifying for tenure; and
- Establishing a program to encourage highly effective teachers and principals to work in low performing and high poverty schools.

Additional key features of MSDE's RtTT application included:

- Revising the state curriculum and online instructional tool kit to align with the CCSS;
- Moving towards a P-20 longitudinal data system;
- Training for school personnel on the new curriculum, assessments, and state data systems;
- Expanding alternative routes to certification for teachers and principals;
- Reporting on the effectiveness of in-state teacher and principal preparation programs; and
- Targeting interventions to persistently low achieving schools and districts (bottom 5%).

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<sup>45</sup> MSDE has already changed its website to comply with the federal Family Education Rights and Privacy Act (FERPA) to prohibit the release of individually identified information to the public.



**MCPS and MSDE Implementation of the CCSS:** MCPS began implementation of CCSS three years ago with the implementation of the Integrated Elementary Curriculum, now termed Curriculum 2.0. MCPS' view is that its own "curriculum has been more rigorous than the state's voluntary curriculum for many years" and MCPS expects that the CCSS "will bring the rest of the state more in line with the expectations that MCPS has for its students."<sup>46</sup>

Currently, Curriculum 2.0 is being implemented in Grades K-3; next year, it is scheduled to expand to Grade 4 and possibly Grade 5. The MCPS website states that Curriculum 2.0 was established to:

- Foster creative and critical thinking in addition to academic success skills;
- Integrate the curriculum to maximize instructional time;
- Foster small group instruction in reading and mathematics;
- Meet state curriculum requirements in all content areas; and
- Create an all-electronic platform for disseminating the curriculum.

According to MCPS staff, MCPS is currently making changes to its middle and high school courses to align with the CCSS. MSDE is also updating the state's K-12 curriculum to align with CCSS for statewide implementation in all schools next year. As part of its CCSS implementation, two years from now (2014-15), MSDE will replace Maryland School Assessments (MSAs) in reading and mathematics with PARCC assessments.

The PARCC assessments are designed to track student progress toward college- and career-readiness. Besides using a computer-based format to assess student's academic skills, the PARCC will assess higher-order skills such as critical thinking, communications, and problem solving. Twenty-three other states will also use the PARCC assessments to monitor their progress in achieving the CCSS. Given the more challenging standards associated with the PARCC compared to current state assessments, it is widely perceived that the achievement gap could widen with the new assessment. Kentucky's recent transition to a PARCC-like assessment supports this perception.<sup>47</sup>

#### **4. Proposed Suspension Regulations**

The Maryland State Board of Education has proposed new discipline regulations designed to: reduce suspensions for non-violent incidents, reduce disparities in suspension rates among subgroups, ensure timeliness in the disciplinary process, and ensure student access to educational services during suspensions and expulsions. The proposed regulations are expected to be enacted in 2013. The following summary of the proposed regulations highlights some key changes:

- **Changes definitions:** Districts must define short-term suspensions as three days or less and long-term suspensions as four to ten days. Suspensions longer than ten days will have to be approved by the Superintendent.
- **Eliminates automatic disciplinary action:** The general school discipline regulations must eliminate both expulsion and any policies that require automatic discipline without discretion. Instead, districts must rely on existing federal and state law if firearms are brought to school.

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<sup>46</sup> See <http://www.montgomeryschoolsmd.org/curriculum/2.0/faq.aspx>

<sup>47</sup> See <http://www.washingtonpost.com/blogs/answer-sheet/wp/2012/12/07/americas-next-education-crisis-and-who-benefits/>

- **Eliminates disparities in suspensions:** Districts must develop a plan to eliminate disparities in discipline by race, ethnicity, and special education status within three years if MSDE determines that such disparities exist.
- **Educational services:** Districts must provide educational supports to students while on suspension, including providing daily homework that is checked by the assigning teacher.
- **New timeliness for disciplinary process:** Districts must complete investigations extending a suspension beyond 10 days by the 10<sup>th</sup> day or the student will return to his/her school on the 11<sup>th</sup> day. If an appeal is filed, school systems must schedule hearings within 30 days and make a decision within 10 days of the hearing.

Once implemented, these new suspension regulations will create a new requirement for MCPS to eliminate the achievement gap in suspension rates that exceeds existing requirements, to reduce disparities in suspension rates by disability status under federal law (i.e. Individual with Disabilities Education Act).

## **Chapter VIII: Promising Practices for Narrowing the Achievement Gap**

As noted in Chapter II, research exists about the risk-factors that contribute to the achievement gap. Programs and strategies to narrow the achievement gap can target one or more of these specific risk factors and in turn vary by approach – from focusing on improving teacher quality to improving the early childhood education experiences of the lowest performing subgroups. Despite these various practices, “the knowledge base on closing the achievement gap ... is especially thin.”<sup>48</sup>

Empirical research on best practices for increasing individual student achievement exists;<sup>49</sup> however, this is not the same as reducing the achievement gap itself.<sup>50</sup> To narrow the achievement gap, interventions have to accelerate the performance of black, Latino, and service group students (i.e. students eligible for special education, ESOL, or FARMS) relative to their peers. Further, researchers note that “focusing on reform strategies that improve achievement among all students will not ameliorate the achievement gap” and that “most school policies impacting test scores impact all racial groups in a similar matter, without redistributing benefits across groups.”<sup>51</sup>

The weak research base for understanding best practices for narrowing the achievement gap is emblematic of educational research in general. Since scarce resources are typically used to implement rather than evaluate programs, too few resources are devoted to evaluating the efficacy of educational initiatives. Despite this limited research base, researchers have identified some common practices for potentially narrowing the achievement gap. This chapter summarizes these promising practices in two parts:

- A. K-12 Promising Practices** identifies practices implemented in schools and classrooms that are recognized by researchers as effective or potentially effective at narrowing the achievement gap. These practices target the school-related factors that contribute to the achievement gap, such as funding and teacher quality.
- B. Beyond School Promising Practices** describes practices and approaches implemented beyond the typical school day to narrow the achievement gap. These practices address three areas: reducing economic inequality, expanding early and extended learning opportunities for children, and improving parenting practices.

In a nutshell, instead of offering a compelling directory of research-proven best practices for narrowing the achievement gap, this chapter synthesizes a limited research base of promising practices. Despite the common wisdom that “schools should do what works for the kids” to narrow the achievement gap, a dearth of good research exists to guide school efforts. The consensus and codification of narrowing the achievement gap as a national policy goal under No Child Left Behind makes this lack of research especially problematic. As such, more research is needed at the national, state, and local levels to understand which practices and approaches are most effective at narrowing the achievement gap by race, ethnicity, and service group status.

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<sup>48</sup> Murphy, *Closing Achievement Gaps: Lessons from the Last 15 Years*, 2009 - p. 11

<sup>49</sup> See What Works Clearinghouse for programs effective overall (<http://ies.ed.gov/ncee/wwc/>)

<sup>50</sup> Murphy, 2009

<sup>51</sup> Ibid, p. 11 and Bali and Alvarez, *Schools and educational outcomes: What causes the ‘race gap’ in student test scores?*, 2003 p. 485, cited by Murphy, 2009; see also Ferguson in *The Black-White Test Score Gap* (eds. Jencks and Phillips), 1998

## **A. K-12 Promising Practices**

The two sections that follow summarize the macro (school-based) and micro (classroom-based) educational approaches identified as promising practices for narrowing the achievement gap in the research literature.

### **1. School-based best practices**

Education policy and effective schools research identifies six approaches as potential best practices for narrowing the achievement gap. Researchers have found these approaches can lead to a narrowing of the achievement gap, but rigorous evaluations describing the magnitude of their specific impact are generally not available. In most cases, the research relies on correlations or quasi-experimental data analysis. A description of these approaches and a review of how they impact the narrowing of the achievement gap (primarily by race) follows.

- **Desegregation:** National efforts to equalize opportunity began with *Brown v. Board of Education*, which outlawed separate but equal K-12 school systems. Since white schools regularly received better resources and funding than their black counterparts, desegregation was viewed as a strategy for enhancing the educational opportunity of black students and, in turn, narrowing the achievement gap. Scholars disagree about the impact school desegregation can have on the achievement gap.<sup>52</sup> However, an analysis by Grissmer<sup>53</sup> and his colleagues of the factors that led to a narrowing of the achievement gap on the NAEP between 1971 and 1996 concludes that desegregation efforts, particularly in the Southeast, led to a narrowing of the gap. It also notes that desegregation led to gains by all student groups, and that these policies likely helped blacks more than whites. Additional researchers note that had greater progress been made in school desegregation efforts through the 1990's, the black-white test score gap would have diminished further.<sup>54</sup>
- **Equalize Funding:** Historically, disparities in education funding have existed between affluent (suburban) school systems that disproportionately serve white students and high poverty (urban) school systems that disproportionately serve students of color. For example, in 1973, the gap between urban and high wealth districts in New Jersey was nearly \$7,000 in 2010 dollars.<sup>55</sup> To help equalize funding across low and high income districts, advocates have brought more than 20 state-level class action educational adequacy lawsuits aimed at increasing the resources that lower-income districts have to educate their students. However, scholars disagree on whether money spent on education can make enough of a difference to influence school outcomes.

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<sup>52</sup> For example, Dobie and Fryer (2009) state that aggressive strategies that placed disadvantaged students in better schools through busing and school choice plans left the racial achievement gap essentially unchanged. See <http://www.economics.harvard.edu/faculty/fryer/files/hcz%204.15.2009.pdf>

<sup>53</sup> Grissmer, et. al "Why Did the Black White Score Gap Narrow in the 1970s and 1980s" in *The Black-White Test Score Gap* (eds. Jencks and Phillips), 1998

<sup>54</sup> See Vignor and Ludwig "Segregation and the Test Score Gap" and Berends and Peraloza "Changes in Families, Schools, and the Test Score Gap" in *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap* (eds. Magnuson and Waldfogel), 2009

<sup>55</sup> See New Jersey's Education Funding Report, February 23, 2012

Darling-Hammond argues that the question should not be whether money spent on education can make a difference, but how strategic investments can influence school outcomes. She cites a growing body of evidence illustrating that interventions can pay off when they are focused on enhancing teacher quality.<sup>56</sup>

- **Reduce Class Size:** Disparities exist in average class sizes by race at the national level; yet here again, researchers disagree on whether reducing class sizes can narrow the achievement gap.<sup>57</sup> Data from the School and Staffing Survey indicates that the highest percentage of teachers with classes of 25 or more students occurs among schools that are 50 percent minority or higher.<sup>58</sup> Grissmer finds that reductions in average class sizes between 1971 and 1996 were associated with a narrowing of the achievement gap during this time frame. Since black students experienced far higher average class sizes during segregation, reductions in average class sizes could have had a disproportionate impact on the performance of black students.<sup>59</sup> Further, research from Tennessee has found that significant reductions in class size at the elementary level – in particular, lowering class size to 13 to 20 students – benefits low-income and black students more than their peers.<sup>60</sup>
- **Enhance Teacher Quality:** Enhancing teacher quality usually focuses on three areas – enhancing teacher preparation (e.g. education), experience, and test scores. Research has found that students learn more from teachers with strong academic skills, and that secondary students in particular learn more from teachers who hold degrees in the subjects they are teaching.<sup>61</sup> Moreover, educational outcome gaps by race and income often correlate with teacher quality, with white and affluent students often enjoying better access to qualified teachers than low-income or black students.<sup>62</sup> However, Grissmer’s review of the factors that helped to narrow the achievement gap finds at best weak evidence that protracted teacher education or increased teacher experience helped to narrow the gap. The effect of high teacher test scores on narrowing the gap is more definitive: Ferguson’s review of the literature finds that higher teacher scores improve the performance of the lowest performing students. Ferguson also notes that improving teacher quality for students most at risk will do more to narrow the achievement gap than other educational interventions.<sup>63</sup> The use of merit pay to improve teacher quality and narrow the achievement gap has not been effective to date.<sup>64</sup>

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<sup>56</sup> See Darling-Hammond, 2010

<sup>57</sup> For example, Dobbie and Fryer (2009) note that smaller schools and classrooms have generally not reduced the achievement gap.

<sup>58</sup> See figure 8 in Barton and Coley, 2010

<sup>59</sup> Barton and Coley note that there may be some benefits from decreased class sizes on narrowing the gap, but “we do not have separate trends by race” to prove this possibility. From the Black-White Achievement Gap: When Progress Stopped, 2010 <http://www.ets.org/Media/Research/pdf/PICBWGAP.pdf>

<sup>60</sup> Finn, Class Size and Student Risk: What is Known, What is Next?, 1998

<http://www.ed.gov/pubs/classsize/title.html>

<sup>61</sup> See NCES, Monitoring School Quality: An Indicators Report, 2001

<sup>62</sup> See for example the Education Trusts’ 2006 report, Missing the Mark: States’ Teacher Equity Plans Fall Short.

<sup>63</sup> Ferguson, Can Schools Narrow the Black-White Test Score Gap? in Jencks and Phillips (1998)

<sup>64</sup> Dobbie and Farley (2009) list merit pay for principals, teachers, and students as a failed strategy for narrowing the achievement gap. However, Whitehurst (2009) finds that most evaluations of merit pay describe a positive effect on student achievement although the strongest study with this funding was conducted in India (see <http://www.brookings.edu/research/papers/2009/10/14-curriculum-whitehurst>)

- **Improve Curriculum:** Researchers have found that students' academic achievement is correlated with the rigor of the curriculum.<sup>65</sup> For example, Chubb and Moe have found that "All things being equal, academic programs promote academic achievement."<sup>66</sup> Grisser and colleagues note the potential importance of challenging coursework taking as a likely factor in narrowing the achievement between 1971 and 1996. Barton and Coley note that "while some gaps remain, there has been progress across all racial/ethnic groups in taking what is called a 'midlevel' curriculum in high school" although gaps in AP, calculus, and advanced science participation still exist, particularly for black students.<sup>67</sup>
- **Instructional Interventions:** The What Works Clearinghouse has identified 39 instructional interventions that have positive or potentially positive effects on educational attainment or academic achievement.<sup>68</sup> These interventions include curriculum approaches aimed at improving math, reading, and science performance. However, it remains unclear whether many of these interventions that effectively improve student performance also help narrow the achievement gaps between student subgroups. An exception to this pattern is *Success for All*, an elementary whole school reform model that improves student achievement while narrowing the achievement gap between the highest and lowest performing students.<sup>69</sup> More specifically, a meta-analysis of whole-school reform studies inclusive of *Success for All* found that the black-white achievement gap among elementary schools decreased from one-half of a standard deviation to less than one-tenth of standard deviation.<sup>70</sup>

Finally, analysts have reviewed the research on **charter schools** and generally found them to be ineffective at narrowing the achievement gap. While some charter schools, such as KIPP, may narrow the achievement gap, most charter schools have had no impact on narrowing the achievement gap. For example, Whitehurst's review of relevant research<sup>71</sup> generally finds "very small differences in students' achievement" between charters and traditional public schools, with the exception of oversubscribed charter schools that rely on lotteries to determine enrollment. Dobbie and Fryer also find that "there are several successful charter schools and charter-management organizations, but the bulk of the evidence finds only modest success."<sup>72</sup>

## 2. Classroom-based best practices.

Research on the characteristics of effective classrooms and how children learn has identified several best practices for narrowing the achievement gap. Psychologists Boykin and Noguera find that best practices for closing the achievement gap include classroom-based strategies aimed at enhancing student engagement among black and Latino students who tend to be less engaged than their peers.<sup>73</sup> Engagement here refers to how much time students are actively and progressively involved in the learning process (i.e. time on task) rather than teacher instructional time.

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<sup>65</sup> NCES, 2001

<sup>66</sup> Cited by Barton and Coley in *Parsing the Achievement Gap II*, 2009

<sup>67</sup> Ibid, p. 3

<sup>68</sup> What Works Clearinghouse (<http://ies.ed.gov/ncee/wwc/>)

<sup>69</sup> Ferguson in Jencks and Phillips, 1998

<sup>70</sup> Gorey, *Comprehensive School Reform: Meta-Analytic Evidence of Black-White Achievement Gap Narrowing*, 2009

<sup>71</sup> Whitehurst, 2009

<sup>72</sup> Dobbie and Fryer, 2009, p. 1

<sup>73</sup> Boykin and Noguera, 2011

A description of the promising instructional approaches noted by Boykin, Noguera, and other researchers and their potential for narrowing the achievement gap follows. It should be noted that, as of yet, there are no large-scale empirical studies demonstrating that these approaches narrow the achievement gap.

- **High Expectations:** Barton and Coley’s review of the correlates of the achievement gap finds that students learn more in schools that emphasize high academic expectations. Further, Ferguson’s review of the research literature finds that white teachers tend to have lower expectations for black children (which may be warranted based on past experience) and that black students care more about teacher perceptions and expectations than white children.<sup>74</sup>

Darling-Hammond’s review of the research also finds that students in schools with intellectually challenging, relevant, and high levels of authentic instruction (i.e., “instruction focused on active learning calling for higher-order thinking, extended writing, and products that resemble how knowledge is used in the world outside of school”) experienced greater achievement gains.<sup>75</sup> Further, Boykin and Noguera’s review of the research also finds that “the benefits of engagement seem to be especially apparent when the learning and performance demands are more challenging.”<sup>76</sup>

- **High Quality Teaching:** Both Boykin and Noguera, as well as Bennett and his colleagues,<sup>77</sup> cite classroom-based strategies that enhance the cognitive function of students as characteristic of high-quality teaching that can narrow the achievement gap. Based on their respective reviews from psychological research, both sets of researchers found that strategies that enhance teachers’ use of explicit processing tasks successfully narrowed the achievement gap among classroom studies. These strategies are effective because they reduce the load placed on students’ working memories and enable students to process more information automatically. Specific strategies aimed toward this end include:<sup>78</sup>
  - Multiple practice activities;
  - Teaching students to discern patterns or regularities in the problems or texts they are expected to master (schema-based instruction);
  - Directly teaching critical thinking, problem solving, and learning strategies; and
  - Requiring students to elaborate on their answers and responses.

Darling-Hammond<sup>79</sup> further notes that schools designed for teaching and learning must rely on highly competent teachers who collaborate in planning and problem solving. In addition, they note that teachers need structures for collaboration, including teaching teams that share students and plan together, as well as common planning time for teachers.

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<sup>74</sup> Ferguson, Teachers’ Perceptions and Expectations and the Black-White Test Score Gap in Jencks and Phillips, 1998

<sup>75</sup> Darling-Hammond 2010, p. 239

<sup>76</sup> Boykin and Noguera, 2011

<sup>77</sup> Bennett, et. al., All Students Reaching the Top: Strategies for Closing Academic Achievement Gaps, 2004

<sup>78</sup> Boykin and Noguera, 2011

<sup>79</sup> Darling-Hammond, 2010



- **Caring Relationships:** Several studies find that positive teacher-student relationships enhance student achievement.<sup>80</sup> Boykin and Noguera and Bennett and his colleagues find that interpersonal relationships between students and teachers can also help to narrow the achievement gap. More specifically, Boykin and Noguera find that interpersonal relationships between students and teachers:<sup>81</sup>
  - Enhance “Teacher-Student Relationship Quality” where teachers display genuine care and support for students while also demanding that students reach high expectations;
  - Encourage students to focus on mastery (understanding, effort, and improvement) rather than performance relative to others; and
  - Enable the use of collaborative learning approaches that foster “authentic intellectual exchanges ... (among) student participants.”

Further, Bennett et. al. also find that building trusting relationships in schools between students and staff can counter both real and perceived perceptions of cultural bias.<sup>82</sup> Boykin and Noguera also note the effectiveness of designing the curriculum to foster the alignment between teachers’ and students’ values, interests, and learning priorities. Personalizing the curriculum so that students’ personal values and interests are reflected in the curriculum and it becomes relevant to them can also narrow the achievement gap.<sup>83</sup>

- **Enhance Adaptive Learning Postures:** The phrase “adaptive learning postures” refers to approaches that prime a student to become an engaged and more effective learner. Effective adaptive learning postures enable a student to learn academic skills while increasing his or her confidence and ability to learn and cope with the academic demands of schooling.

Boykin and Noguera’s review finds that schools can teach students to improve their adaptive learning postures, and this in turn can narrow the achievement gap by improving student engagement among black and Latino students. More specifically, they find that adaptive learning instruction can enhance the following set of skills among students:

- Self efficacy – a student’s confidence in his or her ability to successfully complete a task;
- Self-regulated learning – a student’s ability to set goals for oneself and then self-monitor actions to progress toward those goals; and
- Incremental beliefs about ability – a student’s belief that effort counts more than fixed ability in achieving desired goals.

Bennett, et. al. also advocate for the adoption of the following “pro-academic” behaviors to enhance the adaptive learning postures of black and Latino students and narrow the achievement gap:

- Expand access to capital that supports pro-academic behaviors (e.g. income, health, and social networks);
- Support family, community, and academic environments;
- Enhance students’ socialization to the attitudinal and behavioral demands of high academic achievement;
- Promote social and academic integration;

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<sup>80</sup> For an example, see the National Research Council’s *Engaging Schools: Fostering High School Students’ Motivation to Learn*, 2003 <http://www.nap.edu/openbook.php?isbn=0309084350>

<sup>81</sup> Boykin and Noguera, 2011

<sup>82</sup> Bennett et. al., 2004

<sup>83</sup> Boykin and Noguera, 2011



- Increase students' exposure to various forms of supplementary education; and
- Increase students' exposure to models of academic excellence and exemplars of scholarly practice.

## **B. Beyond School Promising Practices**

Researchers often recognize that even when effective schooling exists, other socioeconomic factors can contribute to the achievement gap. For example, poverty or wage discrimination can prevent universal access to high quality preschools or summer learning opportunities for older students. The gaps created by the lack of access to these opportunities can spillover to the classroom and K-12 school environment.<sup>84</sup> Others note that differences in parenting practices by race and income may contribute to the achievement gap as well. The following section describes the “beyond school” correlates of the achievement gap and synthesizes the evidence on the efficacy of related efforts and approaches on narrowing the achievement gap.

### **1. Household Inequality**

Researchers generally agree that income, social, housing, and health disparities between low and middle income families correlate with and likely foster the achievement gap by race, particularly before children enter school.<sup>85</sup> Correlates refer to factors that researchers associate with the achievement gap, while recognizing that they may not necessarily create the achievement gap. For example, Barton and Coley find that minority students are more likely to suffer from low birth weights, food insecurity, and exposure to environmental hazards such as lead and mercury that can diminish cognitive ability.<sup>86</sup> Black and Latino students are also more likely to move frequently, and the resulting change in schools can undermine academic achievement.<sup>87</sup>

Grissmer and colleagues found that policies designed to reduce household inequality by race between 1960 and 1996, including the War on Poverty, have helped to narrow the achievement gap.<sup>88</sup> Specifically, they found that many family characteristics that correlate with test performance – such as parent income and education – changed significantly during this time frame, particularly for black families. In turn, they estimate that the reductions in inequality among families by race accounted for up to one quarter of the gap reduction on the NAEP between 1971 and 1996.

Several researchers also argue that there has been a stagnation in the white-black NAEP score gap since the 1990's as a result of the widening gap in income inequality between white and black families.<sup>89</sup> Magnuson and Waldfogel, for example, note that since progress in closing the parental education gap by race has slowed since 1990, especially for college attainment, school desegregation has slowed or reversed in some districts. They also find that growing family income disparities negatively impact families and schools, and that this in turn influences test scores. Barton and Coley also argue that increasing concentrations of poverty (particularly in the inner cities), lower rates of employment and generational upward mobility, and the decline of nuclear family arrangements among black families may also suppress efforts to narrow the achievement gap.<sup>90</sup>

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<sup>84</sup> Darling-Hammond (2010) refers to the achievement gap as the “opportunity gap”

<sup>85</sup> See for example, Rothstein, 2004

<sup>86</sup> Barton and Coley, 2009

<sup>87</sup> Ibid.

<sup>88</sup> Grissmer in Jencks and Phillips, 1998

<sup>89</sup> See Magnuson and Waldfogel, 2008

<sup>90</sup> Barton and Coley, 2010

Whether programs designed to offset the impacts of poverty on educational outcomes effectively reduce the achievement gap remains an open question. Generally, a dearth of evaluation research to understand the specific impacts of social programs exists; however, some evaluations of integrated housing programs have demonstrated favorable results.

Rothstein, for example, notes that the federally-funded Moving to Opportunity program that placed low-income families in moderate to middle income neighborhoods via a housing voucher generated favorable impacts among elementary students in the mover families.<sup>91</sup> And a recent study by Schwartz on housing integration in Montgomery County found that after seven years, elementary students whose families received public housing in low poverty neighborhoods and attended low poverty schools narrowed the achievement gap with their non-poor peers by half.<sup>92</sup> They also outperformed their public housing peers enrolled in “red-zone” schools that received additional funding.

## **2. Early Childhood Education and Extended Learning**

Barton and Coley have identified differences in early childhood education and extended learning opportunities (e.g. after and summer school) by race and income as correlates of academic achievement and, in turn, the achievement gap.<sup>93</sup> For example, they note that minority and low-income children make less academic progress over the summer compared to their peers. They also find that differences in early childhood experiences by race, including access to preschool, may matter more, and that the gap in such experiences by race may be wider than previously recognized.<sup>94</sup>

Researchers generally agree that high-quality preschool programs, inclusive of wrap-around services for low income families, can help reduce the school readiness gap by race, despite the mixed evidence on improving academic achievement for the long term.<sup>95</sup> For example, Whitehurst notes that most advocates for more early childhood programming tout the long-term benefits of two small and expensive programs from the 1960’s and 1970’s while they ignore the less than impressive results of large-scale Head Start evaluations.<sup>96</sup> However, Whitehurst writes that there are “sound reasons from our knowledge of developmental science to invest in high quality early intervention programs for children who are unlikely to receive the developmental support they need at home.”<sup>97</sup>

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<sup>91</sup> Rothstein, 2004

<sup>92</sup> Schwartz, *Housing Policy Is School Policy: Economically Integrative Housing Promotes Academic Success in Montgomery County, Maryland*, 2010 <http://tcf.org/assets/downloads/tcf-Schwartz.pdf>

<sup>93</sup> Barton and Coley, 2009

<sup>94</sup> Barton and Coley, 2010

<sup>95</sup> See Ferguson (1998) and Dobie and Fryer (2009)

<sup>96</sup> Whitehurst, 2009

<sup>97</sup> Ibid, p. 6

### **3. Parenting Practices**

Barton and Coley have identified differences in parenting practices by race as correlates that associate with academic achievement.<sup>98</sup> They find, for example, that black parents are less likely to read to their young children daily or participate in volunteer activities at their child's school. They also find that fewer minority students live with two parents compared to their white peers, and that minority and low income children also watch more television than their peers.

Some researchers suggest that differences in parenting practices should be considered a factor in narrowing the achievement gap, even among children who start school with the same test scores. For example, when Phillips et. al. found that the achievement gap widened from K-12, even among black and white children with the same initial test scores, they questioned whether parents, schools, or some combination of the two contributed to this gap.<sup>99</sup> They note that, although schools may treat black and white students differently, "it is also possible that blacks' parenting practices, peer influences, summer learning opportunities, or beliefs about their academic ability could explain why they learn less between first and twelfth grades than initially similar whites."<sup>100</sup>

Research demonstrates that school-based parent training programs can improve academic achievement<sup>101</sup> and that nurse-home visitation programs focused on effective parenting practices can increase school readiness among young children.<sup>102</sup> It's unclear, however, whether parent training or nurse-home visitation programs are effective at narrowing the achievement gap.

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<sup>98</sup> Barton and Coley, 2009

<sup>99</sup> Phillips, Crouse, and Ralph, Does the Black-White Test Score Gap Widen After Children Enter School? In Jencks and Phillips, 1998

<sup>100</sup> Ibid, p. 232

<sup>101</sup> See Graue, Weinstein, and Walberg (1983) cited by Walberg and Paik in Effective Educational Practices [http://www.ibe.unesco.org/fileadmin/user\\_upload/archive/publications/EducationalPracticesSeriesPdf/prac03e.pdf](http://www.ibe.unesco.org/fileadmin/user_upload/archive/publications/EducationalPracticesSeriesPdf/prac03e.pdf)

<sup>102</sup> See "Social Programs That Work" <http://evidencebasedprograms.wordpress/1366/nurse-family-partnership>

## **Chapter IX: Summary of Findings**

The “achievement gap” refers to disparities in educational performance among different student subgroups. Achievement gap studies typically report differences between high performing subgroups (e.g., whites, Asians, and high income students) and low performing subgroups (e.g., blacks, Latinos, and low income students). Some studies also compare differences by students’ disability status and English language proficiency.

This Office of Legislative Oversight (OLO) report tracks differences between high and low performing students in Montgomery County Public Schools by race, ethnicity, and service group<sup>103</sup> across 11 measures of student achievement.

Measures of MCPS’ progress in narrowing the gap are based on descriptive side by side comparisons of particular student cohorts at two points in time (e.g., 3<sup>rd</sup> graders in 2007 compared to 3<sup>rd</sup> graders in 2012) rather than longitudinal data that describes the progress of the same set of students overtime (e.g., 3<sup>rd</sup> graders in 2007 compared to 7<sup>th</sup> graders in 2012) or statistical testing to determine if descriptive changes in performance among subgroups are statistically significant.

The County Council asked OLO to update its 2008 achievement gap report to further the Council’s understanding of the achievement gap in MCPS and enhance the Council’s review and oversight of MCPS budget requests targeted at closing the achievement gap. Specifically, the Council asked OLO to prepare a report that:

- Explains the different ways the term “achievement gap” is defined and used;
- Describes federal and state laws related to closing the achievement gap;
- Reviews best practices for closing the achievement gap; and
- Summarizes student performance data that describes the magnitude and nature of the achievement gap in MCPS.

This chapter presents nine key project findings in three parts as summarized below:

- A. Methodology and Results** explains the measures and analysis that form the basis for OLO’s review; describes the size and pattern of MCPS’ current achievement gaps; and reports on the measures where MCPS narrowed the gap (five measures), achieved mixed progress (two measures) or lost ground (four measures).
- B. Policy Alignment and Effects** addresses how MCPS’ goals for narrowing the achievement gap align with federal and state policy goals and how implementation of the Common Core State Standards might affect MCPS’ efforts to close the achievement gap in the future.
- C. Research** describes the research about what works to close the achievement gap and the implications of this for MCPS and Montgomery County.

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<sup>103</sup> Service group refers to students receiving special education, English for Speakers of Other Languages, and/or free and reduced price meals.

## **A. Methodology and Results Findings**

**Finding 1: Eleven performance measures that encompass three levels of student performance form the basis for OLO’s current review of the achievement gaps that exist among MCPS students and how these gaps have changed over the past three to five years.**

OLO’s review of MCPS’ achievement gaps provides multiple perspectives on two questions:

- Where do MCPS achievement gaps exist in 2012?
- How has the size of MCPS’ achievement gaps changed over the past three to five years?

This review creates two profiles of MCPS’ achievement gaps, using two sets of student subgroup data. One profile shows gaps in student performance based on a student’s race and ethnicity and the other shows gaps based on a student’s service group status (i.e. receives special education, English for Speakers of Other Languages, and/or free or reduced price meals).

Eleven performance measures form the building blocks of this descriptive analysis of available data. Since some of the measures report data for two or more tests (i.e. reading and math) and/or report data for multiple grade levels, these 11 measures yield a set of 24 sub-measures. Exhibit 1 in Chapter III describes these measures which are grouped as follows:

- Four sets of measures assess **grade level** student performance;
- Four sets of measures assess **above grade level** student performance; and
- Three sets of measures track **at-risk** student performance.

Due to data limitations, OLO could not test for statistical significance in the analysis of data for this study. Instead, OLO calculated four data points for each measure to determine the size of the gaps in student performance among different subgroups and whether the gaps had narrowed, widened or stayed the same over the past three to five years. Specifically,

- **Current performance** shows the percentage of students who met the benchmark by subgroup to show overall levels of achievement.
- **Performance ratios** compare the relative performance of low and high performing subgroups to a reference group to show the magnitude of current achievement gaps.
- **Percent change in performance** describes the rate of change in the percentage of students meeting a performance benchmark over a three to five-year period.<sup>104</sup>
- **Percent change in the achievement gap** describes the rate of change in the achievement gap between low and high performing student groups over a three to five-year period.<sup>105</sup>

The rest of this section describes MCPS’ current achievement gaps (Finding 2) and highlights where MCPS has and has not made progress in closing the gaps (Findings 3, 4, and 5). See Chapters III – VI and the appendix of the report for more details and data for each individual measure.

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<sup>104</sup> Depending on the years of data available, percent change in performance is typically calculated as the difference in student performance between 2007 and 2012, divided by student performance in 2007.

<sup>105</sup> Depending on the years of data available, percent change in the achievement gap is typically calculated as the difference in the achievement gap between 2007 and 2012, divided by the achievement gap in 2007.

**Finding 2: MCPS’ achievement gap is narrowest on grade level measures and widest on measures of above grade level and at-risk performance.**

Table 9-1 describes the current performance of MCPS subgroups by race, ethnicity, and service group across the 11 sets of measures reviewed in this report based on the most recent data available.

**Table 9-1: Current MCPS Performance by Measure and Subgroup**

Measures and Indicators	Performance by Race and Ethnicity				Performance by Service Group Status			
	White*	Asian*	Black	Latino	All Students	Special Ed.	ESOL	FARMS
Grade Level Measures								
School Readiness	88%	86%	77%	71%	81%	52%	71%	71%
MSA Prof.- Reading, Grade 3	95%	95%	79%	83%	89%	72%	79%	78%
MSA Prof. – Math, Grade 3	95%	95%	80%	84%	90%	64%	81%	80%
MSA Prof. – Reading, Grade 5	95%	95%	88%	90%	94%	78%	80%	86%
MSA Prof. – Math, Grade 5	95%	95%	77%	79%	88%	66%	65%	75%
MSA Prof.- Reading, Grade 8	95%	95%	79%	78%	88%	66%	46%	74%
MSA Prof. – Math, Grade 8	91%	94%	60%	60%	77%	45%	45%	54%
Graduation (4 Yr. Cohort Rate)	94%	95%	82%	77%	87%	63%	53%	77%
College and/or Career Readiness (USM/CTE)	85%	83%	64%	64%	81%	48%	44%	67%
Above Grade Level Measures								
MSA Adv.– Reading, Grade 3	39%	39%	12%	10%	26%	9%	5%	9%
MSA Adv. – Math, Grade 3	61%	65%	24%	24%	44%	16%	16%	21%
MSA Adv. – Reading, Grade 5	81%	79%	47%	46%	65%	32%	20%	40%
MSA Adv. – Math, Grade 5	54%	63%	18%	20%	39%	11%	9%	15%
MSA Adv.– Reading, Grade 8	74%	74%	38%	34%	56%	20%	11%	28%
MSA Adv. – Math, Grade 8	63%	69%	19%	18%	43%	11%	14%	14%
Algebra 1 by Grade 8 with C or above	79%	83%	44%	40%	62%	20%	22%	35%
AP/IB Performance	70%	72%	25%	40%	53%	16%	30%	26%
SAT/ACT Performance	63%	62%	14%	16%	41%	12%	4%	8%
At-Risk Indicators								
Suspensions – Elementary	0.2%	0.2%	1.3%	0.6%	0.6%	2.3%	0.5%	1.1%
Suspensions – Middle	1.7%	1.4%	8.8%	4.8%	4.1%	10.8%	4.2%	8.3%
Suspensions – High	2.1%	0.9%	9.8%	5.0%	4.4%	9.6%	5.0%	8.5%
Ineligibility - Middle	1.5%	0.9%	9.5%	10.0%	5.2%	13.5%	10.2%	12.0%
Ineligibility - High	5.0%	4.6%	21.4%	26.5%	13.4%	25.1%	22.2%	27.6%
Dropouts (4 Yr. Cohort Rate)	3.1%	3.0%	9.4%	13.9%	6.8%	11.6%	26.2%	11.1%
* MSDE does not report subgroup scores above 95% or below 3%, so actual values are above or below these estimates for MSA proficiency, graduation rates, and dropout rates.								

To describe the magnitude of the current achievement gap across the 11 measures reviewed, OLO used performance ratios to compare the performance of lower performing subgroups (e.g. students with disabilities) to their higher performing peers (e.g. regular education students or all students).

Performance ratios describe the relative performance of each subgroup to a reference group by describing how likely each subgroup achieves at the same level as the reference group. For example, if the performance ratio is 100% between Latino and white students, this means that Latino students are just as likely as white students to meet the benchmark. If the ratio is 20%, Latino students are only one-fifth as likely as white students to meet the benchmark; if the ratio is 200%, Latino students are twice (two times) as likely as white students to meet the benchmark.

Table 9-2 on the next page describes performance ratios by race, ethnicity and service group status for each of the 11 sets of measures considered. Using the most current data available, the performance of Asian, black, and Latino students are compared to their white peers using performance ratios; and, depending on the measure, the performance of students receiving special education, ESOL, and FARMS are compared to peers not receiving these services or all students.<sup>106</sup>

Overall, the magnitude of the achievement gap is narrowest among grade level measures of performance where a majority of students meet the benchmark. For example, 88% and 90% of black and Latino 5<sup>th</sup> graders demonstrated proficiency in reading on the MSAs in 2012 compared to 95% of white 5<sup>th</sup> graders as noted in Table 9-1. In turn, Table 9-2 notes that black and Latino students were 93-94% as likely as their white peers to demonstrate proficiency on this measure and students receiving special education, ESOL, or FARMS were 83-91% as likely as their non-service peers to reach this benchmark. Overall, the achievement gap among grade level measures is relatively narrow with low performing subgroups being on average 80-90% as likely as their higher performing peers to reach these benchmarks.

Conversely, the magnitude of the achievement gap is higher on measures where only a minority of students meets the benchmark. For example, black and Latino graduates were only 22-25% as likely as their white peers to score 1,650 or above on the SAT or 24 or above on the ACT; students receiving special education, ESOL, or FARMS were 9-29% as likely as all students to reach this benchmark. As such, the achievement gap for above grade level measures is larger than the gap for grade level measures, with lower performing subgroups often being less than half as likely as their higher performing peers to reach above grade level benchmarks of performance.

Finally, for the at-risk measures, the achievement gap is larger among these indicators than among grade level metrics. The higher prevalence rate of low performing subgroups demonstrating at-risk outcomes is reflected by their performance ratios exceeding 100% compared to the high performing subgroups. For example, black and Latino students were 2 to 4 times as likely as their white peers to have been suspended in middle school, and students receiving special education or FARMS were 1 to 1.5 times more likely than all students to have been suspended. Generally, for the at-risk measures, low performing subgroups are often more than twice as likely as their higher performing peers to demonstrate these outcomes.

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<sup>106</sup> More specifically, service group comparisons for school readiness, the Maryland School Assessments, and graduation and dropout rates compare students who receive services to those who do not, while for all of the other measures, performance is compared between students receiving services and all students.

**Table 9-2: Magnitude of Current MCPS Achievement Gaps by Measure**

Measures and Indicators	Performance Ratios by Race and Ethnicity (1)			Performance Ratios by Service Group Status (2)		
	Asian	Black	Latino	Special Ed.	ESOL	FARMS
Grade Level Measures						
School Readiness (3)	98%	88%	81%	63%	83%	83%
MSA Proficiency- Reading, Grade 3	100%	83%	87%	80%	87%	83%
MSA Proficiency – Math, Grade 3	100%	84%	89%	69%	87%	85%
MSA Proficiency – Reading, Grade 5	100%	93%	94%	83%	84%	91%
MSA Proficiency – Math, Grade 5	100%	81%	83%	73%	86%	80%
MSA Proficiency- Reading, Grade 8	100%	83%	82%	73%	51%	79%
MSA Proficiency – Math, Grade 8	103%	66%	65%	56%	57%	62%
Graduation (4 Year Cohort Rate)	101%	87%	82%	70%	59%	84%
College and/or Career Readiness (meets USM and/or CTE requirements)	97%	75%	75%	60%	55%	83%
Above Grade Level Measures						
MSA Advanced – Reading, Grade 3	99%	30%	26%	33%	16%	24%
MSA Advanced – Math, Grade 3	108%	40%	39%	33%	31%	38%
MSA Advanced – Reading, Grade 5	97%	57%	56%	46%	29%	52%
MSA Advanced – Math, Grade 5	117%	33%	37%	26%	21%	30%
MSA Advanced – Reading, Grade 8	99%	51%	46%	34%	19%	42%
MSA Advanced – Math, Grade 8	110%	30%	28%	24%	31%	25%
Algebra 1 by Grade 8 with C or above	105%	56%	50%	32%	36%	57%
AP/IB Performance	103%	35%	57%	30%	56%	49%
SAT/ACT Performance	99%	22%	25%	29%	9%	20%
At-Risk Indicators						
Suspensions – Elementary	25%	375%	150%	383%	83%	183%
Suspensions – Middle	75%	506%	275%	257%	97%	203%
Suspensions – High	55%	465%	245%	240%	114%	195%
Ineligibility - Middle	60%	633%	667%	260%	196%	231%
Ineligibility - High	92%	428%	530%	187%	166%	206%
Dropouts (4 Year Cohort Rate)	97%	303%	449%	185%	455%	205%
Notes: (1) compares the performance of each ethnic group to white students; (2) compares the performance of each service group to students not receiving services (school readiness, MSA, graduation and dropout rates) or to all students (all other measures); (3) the performance ratio of 98% for Asian students on the school readiness measure means that this subgroup was 98% as likely as white kindergarteners to demonstrate full readiness for school.						



**Finding 3: MCPS narrowed the achievement gap in school readiness, MSA proficiency, suspensions, academic ineligibility, and graduation rates although large gaps persist for suspensions and academic ineligibility rates by subgroup.**

OLO's analysis of performance data across 11 measures demonstrates that MCPS has achieved progress in narrowing the achievement gap across five sets of measures:

- School readiness
- Proficiency on the Maryland School Assessments (MSAs)
- Suspensions
- Academic ineligibility (three or four quarters)
- Graduation rates

Together, these measures reflect markers of at-risk student performance (suspensions and academic ineligibility) and grade level expectations of student performance (school readiness, MSA proficiency, and on-time graduation). While sizable achievement gaps remain for the at-risk indicators (see Finding 2), across all five of these measures, a majority of each subgroup reached the desired benchmark on each measure, and the performance of every subgroup improved over a three to five year period. Table 9-3 describes these trends.

**Table 9-3: Measures Where the Gap Narrowed**

Measures	Achievement Gap Trends
School Readiness	<p>From 2007 to 2012, the School Readiness gap:</p> <ul style="list-style-type: none"> <li>• Narrowed by 35-39% by race and ethnicity, and by 29-42% by ESOL and FARMS status compared to all students, but</li> <li>• Increased by 24% by disability status compared to all students.</li> </ul>
Proficiency on Maryland School Assessments (MSAs) in Grades 3, 5 and 8	<p>From 2007 to 2012, the MSA proficiency gap narrowed in:</p> <ul style="list-style-type: none"> <li>• Grade 3 by 21-45% by race and ethnicity, and by 7-43% by service group;</li> <li>• Grade 5 by 20-77% by race and ethnicity, and by 2-66% by service group; and</li> <li>• Grade 8 by 8-39% by race and ethnicity, and by 11-40% by service group.</li> </ul>
Suspensions	<p>From 2007 and 2011, MCPS narrowed the gap in suspension rates:</p> <ul style="list-style-type: none"> <li>• In elementary schools by 58-78% by race and ethnicity, and by 38-61% by service subgroup compared to all students;</li> <li>• In middle schools by 40-50% by race and ethnicity and by 14-83% by service subgroup compared to all students; and</li> <li>• In high schools by 22-52% by race and ethnicity, and by 32-50% by service subgroup compared to all students.</li> </ul>

**Table 9-3: Measures Where the Gap Narrowed, Continued**

Measures	Achievement Gap Trends
Academic Ineligibility	<p>From 2007 to 2011, MCPS narrowed the academic ineligibility gap:</p> <ul style="list-style-type: none"> <li>• In middle schools by 44-49% by race and ethnicity, and by 4-47% by service subgroup compared to all students; and</li> <li>• In high schools by 11-17% by race and ethnicity, 11% by FARMS status compared to all students, and 24% by special education status compared to all students.</li> <li>• However, at the high school level, the academic ineligibility gap increased by 11% between students receiving ESOL and all students.</li> </ul>
Graduation Rate (Four Year Cohort Rate)	<p>From 2010 to 2012, MCPS' on-time graduate gap:</p> <ul style="list-style-type: none"> <li>• Narrowed by race and ethnicity by 11-25%;</li> <li>• Narrowed by special education and FARMS status by 8-12%; and</li> <li>• Increased by ESOL status by 2%.</li> </ul>

**Finding 4: MCPS achieved mixed progress in narrowing the achievement gap on two measures – dropout rates, and completion of USM/CTE program requirements among graduates.**

OLO's analysis of performance data for MCPS students across 11 measures demonstrates that MCPS has achieved mixed progress since 2007 in narrowing the achievement gap across two measures: high school dropout rates and completion of University System of Maryland or Career and Technology Education program requirements for graduates. Together, these benchmarks reflect a mix of grade level and at-risk performance measures. Generally, MCPS achieved greater progress in narrowing the achievement gap by race and ethnicity on these two measures than by service group status. Table 9-4 describes these trends.

**Table 9-4: Measures Where the Gap Stagnated or Generated Mixed Results**

Measures	Achievement Gap Trends
Dropout Rates	<p>From 2010 to 2012, the gap in four year cohort dropout rates:</p> <ul style="list-style-type: none"> <li>• Remained unchanged between white and Latino students</li> <li>• Narrowed by 18% between white and black students and by 12% by FARM status, but</li> <li>• Widened by 2-8% by ESOL and special education status</li> </ul>
Completion of USM or CTE Requirements among Graduates	<p>Between 2007 and 2010, the gap among graduates who met USM/CTE program requirements for graduation:</p> <ul style="list-style-type: none"> <li>• Remained unchanged by ESOL status compared to all students,</li> <li>• Narrowed by race, ethnicity, and income by 9-20%, and</li> <li>• Increased by disability status by 27%.</li> </ul>

**Finding 5: The MCPS achievement gap widened across four sets of measures - advanced MSA performance, Algebra 1 completion by Grade 8 with a C or better, AP/IB performance among graduates, and SAT/ACT performance among graduates.**

OLO's analysis of performance data for MCPS students across 11 measures demonstrates that MCPS has lost ground in narrowing the achievement gap across four measures:

- Advanced MSA scores
- Algebra 1 completion by Grade 8 with a C or better
- AP/IB performance among graduates
- SAT/ACT performance among grades

These four measures reflect markers of above grade level expectations and align with MCPS' *Seven Keys*. Generally, each MCPS subgroup achieved progress on these measures over time. However, the highest performing subgroups – white and Asian students and students not receiving special education, ESOL, or FARMS – often achieved the greatest performance gains, thus widening the gaps over time by race, ethnicity, and service group status. Table 9-5 describes these trends.

**Table 9-5: Measures Where the Gap Widened**

Measures	Achievement Gap Trends
Advanced Maryland State Assessment (MSA) Scores in Grades 3, 5 and 8	<p>From 2007 to 2012, the achievement gap in advanced MSA scores:</p> <ul style="list-style-type: none"> <li>• Narrowed among advanced reading scores in Grade 3 by 2-7% across most subgroups but widened by 14% by ESOL status;</li> <li>• Widened among advanced Grade 3 math scores by 5-33% by race, ethnicity, and service group status;</li> <li>• Narrowed among advanced Grade 5 reading scores by race, ethnicity, and income by 2-16%, but widened by special education and LEP status by 21-25%;</li> <li>• Widened among advanced Grade 5 math scores by 3-6% by race and ethnicity and by 16-37% by service group status;</li> <li>• Widened among advanced Grade 8 reading scores by 9% by race and ethnicity and by 27-56% by service group status; and</li> <li>• Widened among advanced Grade 8 math scores by 14-24% by race, ethnicity, and service group status.</li> </ul>
Algebra 1 Completion by Grade 8 with C or higher	<p>From 2010 to 2012, the gap in the percentage of students who completed Algebra 1 by the end of Grade 8 with a course grade of C or higher:</p> <ul style="list-style-type: none"> <li>• Widened by 14-39% by race and ethnicity;</li> <li>• Widened by 7% by special education and FARMS status compared to all students, but</li> <li>• Narrowed by ESOL status by 7% compared to all students.</li> </ul>

**Table 9-5: Measures Where the Gap Widened, Continued**

Measures	Achievement Gap Trends
AP/IB Performance among Graduates	<p>From 2007 to 2012, the gap in AP/IB performance measured by the percentage of graduates who earned qualifying scores on either an AP or IB exam:</p> <ul style="list-style-type: none"> <li>• Widened by race and ethnicity by 17-37%; and</li> <li>• Widened by service group status compared to all students by 6-26%.</li> </ul>
SAT/ACT Performance among Graduates	<p>From 2010 to 2012, the SAT/ACT performance gap among graduates:</p> <ul style="list-style-type: none"> <li>• Widened by race, ethnicity, and income by 3-6%; and</li> <li>• Held constant by special education and ESOL status.</li> </ul>

## B. Policy Alignment and Effects Findings

**Finding 6: Significant federal and state policy changes have weakened the policy imperative for closing the achievement gap. Locally, however, MCPS goals for narrowing the achievement gap continue to exceed federal and state policy mandates.**

Since 2008, significant changes to federal and state policy have weakened the local imperative for closing the achievement gap. At the federal level, the Maryland waiver from No Child Left Behind both diminished the federal requirement for Maryland school systems to close the achievement gap and lessened the consequences for schools not meeting annual performance goals.

At the state level, Maryland's implementation of the Common Core State Standards reflects changes in federal and state policy that raise academic achievement goals and set the expectation that all students will meet benchmarks of college and career readiness instead of the previous NCLB benchmarks of grade level proficiency on math, reading, and science standards.

Locally, MCPS' strategic plan, *Our Call to Action*, and its *Seven Keys for College and Career Readiness* focus on narrowing the achievement gap among several above grade level measures of student performance like SAT scores above 1,650 among graduates. Table 9-6 on the next page provides a summary of the *Seven Key* measures that MCPS tracks to help ensure that its students are prepared for college and entry-level careers upon graduation. Recently, MCPS has indicated that the *Seven Keys* will be updated with measures to reflect 21<sup>st</sup> century standards of college and career readiness, such as critical thinking and problem solving.

Despite the higher academic expectations for student performance exemplified under Maryland's adoption of the Common Core State Standards, OLO finds that MCPS' goals for narrowing the achievement gap continue to exceed federal and state policy goals because they maintain a focus on narrowing the gap in both grade level and above grade level measures of student performance.

**Table 9-6: MCPS’ Seven Keys to College and Career Readiness**

Seven Keys	Data Points
1. Advanced Reading K-2	MCPS Assessment in Primary Reading; Terra Nova 2 in Grade 2
2. Advanced Reading MSA	Maryland School Assessments (MSA)
3. Advanced Math by Grade 5	Advanced Mathematics in Grade 5 Proficiency
4. Algebra 1 by Grade 8	Algebra 1 Completion by the end of Grade 8 with C or higher
5. Algebra 2 by Grade 11	Algebra 2 Completion by the end of Grade 11 with a C or higher
6. 3 on AP/4 on IB	AP/IB Exams Participation and Performance
7. 1,650 on SAT, 24 on ACT	SAT/ACT Participation and Performance

**Finding 7: Challenges in narrowing the gap among above grade level measures suggest that the MCPS achievement gap on statewide assessments will widen with the full implementation of the Common Core State Standards.**

In 2010, Maryland adopted the Common Core State Standards and committed to revising the state curriculum to align with the CCSS. Generally, the CCSS are viewed as more rigorous than Maryland’s current voluntary curriculum because they emphasize college and career readiness rather than only grade-level proficiency in mathematics, reading, and science. In implementing the CCSS, Maryland intends to replace its current Maryland School Assessments (MSA) with the CCSS aligned Partnership for Assessments for College and Careers (PARCC) in 2014-15.

MCPS began implementing the CCSS three years ago with the implementation of the Integrated Elementary Curriculum, now termed Curriculum 2.0. Currently, Curriculum 2.0 is being implemented in Grades K-3; next year, it is scheduled to expand to Grades 4 and 5. MCPS is currently aligning its middle and high school curriculum to the CCSS as well.

When Maryland implements the PARCC assessments, it will join 23 other states that have committed to using the PARCC to monitor their progress in achieving the CCSS. Given the more challenging standards associated with the PARCC compared to current state assessments, it is widely perceived that states’ achievement gaps will widen with this new assessment.

Locally, MCPS’ current student performance data shows more sizable achievement gaps in above grade level measures (e.g. advanced MSA scores) that better align with measures of college and career readiness than grade level measures (e.g. proficient MSA scores). This suggests that MCPS’ future achievement gaps on state assessments will widen when the more rigorous CCSS aligned PARCC assessments are implemented in two years.

## **C. Research Findings**

### **Finding 8: The research base on best practices for narrowing the achievement gap is thin.**

OLO's review of the research identified two sets of promising and best practices for narrowing the achievement gap. The first set of practices focuses on addressing school and classroom-based factors that can impact the achievement gap such as class size, teacher quality, funding, and high expectations. The second set of practices addresses factors beyond school that can impact the achievement gap such as poverty, early childhood education, and parenting practices.

OLO's review overall, however, finds that the research base on best practices for narrowing the achievement gap is thin. While empirical research on best practices for increasing individual student achievement exists, this outcome alone is not the same as reducing the achievement gap. To narrow the achievement gap, interventions have to accelerate the performance of black, Latino, and service group students (i.e. students eligible for special education, ESOL, or FARMS) relative to their peers.

Further, researchers note that focusing on reform strategies that improve achievement among all students will not ameliorate the achievement gap and that most school policies impacting test scores impact all racial groups in a similar matter, without redistributing benefits across groups.<sup>107</sup> As such, more research is needed to understand which practices and approaches are most effective at narrowing the achievement gap.

### **Finding 9: The socioeconomic correlates of the achievement gap suggest that coordination among MCPS, Montgomery County Government, and other agencies and community-based groups is necessary to make progress in narrowing the achievement gap.**

Researchers note that school, community, socioeconomic, and familial factors correlate with the achievement gap. Barton and Coley's synthesis of the achievement gap research identifies 16 factors related to life experiences and conditions that are correlated with cognitive development and academic achievement and thus contribute to the achievement gap:<sup>108</sup>

- Curriculum rigor (e.g. participation in AP courses)
- Teacher preparation (e.g. teacher certification or teaching outside of certification area)
- Teacher experience
- Teacher absence and turnover
- Class size
- Availability of instructional technology
- Fear and safety at school
- Parent participation
- Frequent changing of schools
- Low birth weight
- Environmental damage (e.g. exposure to lead or mercury)
- Hunger and nutrition
- Talking and reading to babies and young children

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<sup>107</sup> See Murphy, 2009, p. 11 and Bali and Alvarez, 2003, p. 485, cited by Murphy, 2009

<sup>108</sup> Barton and Coley, 2009

- Excessive television watching
- Parent-pupil ratio
- Summer achievement gain/loss

A majority of these factors (9 of 16 factors) reflect home and community based-factors that are typically beyond the control of any school system. Locally, Montgomery County Government rather than MCPS serves as the lead on health and child welfare correlates of the achievement gap (e.g. low birth weight and environmental damage). Similarly, local community-based organizations are probably better suited to assist families in enhancing their parenting practices (e.g. reading to children, limiting television) relative to narrowing the achievement gap.

The broad, socioeconomic correlates of the achievement gap suggest that a multi-pronged agency and community based approach will be necessary to achieve further progress in narrowing the gap. Locally, this suggests a partnership between MCPS, Montgomery County Government, and agencies and organizations supporting families aimed at collectively addressing the school and beyond school factors that contribute to the achievement gap.

## **Chapter X: Recommended Discussion Issues**

This chapter outlines the Office of Legislative Oversight's (OLO) recommended issues for Council discussion with MCPS and other agency and organizational representatives during Education Committee worksession and beyond.

Both the persistence of the achievement gap in Montgomery County and a widening of the gap among several measures of above grade level expectations suggest that any serious local effort to close the achievement gap will require a long-term, broad-based commitment and a working partnership among policy makers, elected officials, and administrators both within and outside of the school system. It will also require an ongoing public dialogue that is willing to examine complex data and address difficult policy and funding choices.

The data reviewed throughout this report demonstrate that measuring and tracking the MCPS achievement gap over time is complex. Based on these findings, OLO recommends three specific issues for Council discussion with representatives of MCPS, Montgomery County Government, and other organizations whose efforts collectively can best impact the achievement gap.

OLO's recommended discussion issues relate to MCPS' vision for eliminating the achievement gap, the efficacy of current efforts, and future Council funding decisions related to initiatives aimed at closing the achievement gap. Several of these issues were also recommended for Council discussion in OLO's original achievement gap report (OLO Report 2008-2).

### **Issue #1: Discuss with MCPS representatives how the school system establishes its funding priorities for closing the achievement gap and how MCPS' FY14 budget request reflects these priorities.**

*Our Call to Action*, the school system's strategic plan, articulates dozens of goals focused on narrowing the achievement gap. Examples of MCPS' specific goals include:

- Narrowing the gap in graduation rates,
- Improving performance on state assessments, and
- Eliminating disproportionate representation in suspensions and in AP and honors courses.

MCPS' *Seven Keys* also sets specific goals for narrowing the achievement gap by race, ethnicity, and service group among several measures of college and career readiness, including SAT/ACT performance among graduates, and Algebra 1 completion by Grade 8 with a C or better.

As evidenced in this report, MCPS has made progress and narrowed the achievement gap on five measures of performance, it has achieved mixed progress on two measures, and at the same time, the gap has widened on four measures. Generally, MCPS has achieved greater progress in narrowing the gap among grade level and at-risk measures of student performance than among above grade level measures of performance.

OLO recommends the Council discuss with MCPS how the school system establishes its funding priorities for narrowing the achievement gap. Further, the Council should discuss with MCPS how the school system's FY14 budget request reflects its priorities and whether the school system intends to reallocate resources within the school system's base budget to narrow the achievement gap.



To focus this discussion, OLO recommends the Council consider asking MCPS to identify its top five priority goals related to narrowing the achievement gap within the next two to five years. The purpose of this discussion is to provide the Council with a clearer understanding of MCPS' achievement gap priorities, and give the Council more information about how MCPS officials see Council funding of specific initiatives aligning with these priorities. Recommended questions for discussion include:

- What are MCPS' priorities for narrowing the gap at the elementary, middle, and high school levels? How does the current funding of MCPS programs and allocation of funds reflect the school systems' priorities for narrowing the gap?
- At what school level has MCPS' initiatives to close the achievement gap worked best? Which initiatives are most effective at narrowing the gap? Where do the most promising or most challenging opportunities for improvement exist?
- What resources beyond the \$3.5 million requested for middle school improvement in the FY14 budget does MCPS plan to commit to reducing the achievement gap? Will current resources be reallocated?

**Issue #2: Ask MCPS representatives to describe the school system's explicit expectations for achieving progress in closing the achievement gap based on current trends and planned investments.**

Articulating the specific investments MCPS has made toward narrowing the achievement gap was beyond the scope of this OLO project. Nonetheless, MCPS has clearly made investments aimed at narrowing the achievement gap by race, ethnicity, and service group status. Beyond articulating its goals to narrow the achievement gap in Board of Education actions, policies, and statements, MCPS has implemented specific initiatives toward this end to comply with local, state, and federal policy goals. These include the use of M-stat teams to narrow the achievement gap in out of school suspensions.

Superintendent Starr has indicated that MCPS will focus on professional development, interventions, and community engagement to further enhance student performance and MCPS' implementation of Curriculum 2.0 and the Common Core State Standards. The Council needs to understand the Superintendent's priorities for MCPS in greater detail to understand their respective roles in narrowing the achievement gap and their potential budgetary implications.

OLO recommends that the Council discuss with MCPS the short term and long term progress the school system anticipates it will make to close the achievement gap based on its current trends and planned investments. In particular, OLO recommends the Council ask MCPS to outline the school system's vision for continued progress on priority goals related to closing the achievement gap by race, ethnicity, and service group status and the specific role of Curriculum 2.0 toward this end. Recommended questions include:

- Beyond Curriculum 2.0, what specific strategies and/or initiatives does MCPS currently employ or plan to employ to narrow the achievement gap? What are the budget implications of these strategies?
- What progress does MCPS anticipate in the short term and the long term in narrowing the achievement gap by race, ethnicity, and service group based on these investments?

- How will MCPS use data and evaluation to determine the efficacy of its efforts to narrow the achievement gap?

**Issue #3: Discuss with representatives of MCPS, Montgomery County Government, and community-based groups how they envision their roles working together to eliminate the achievement gap.**

Researchers often recognize that even when effective schooling exists, other socioeconomic factors can contribute to the achievement gap. For example, poverty can limit access to high quality preschools or summer learning opportunities for older students; the gaps created by the lack of access to these opportunities can also spill over to the classroom and school environment. Others note that differences in parenting practices by race, ethnicity, and income may also contribute to the achievement gap; differences in access to health care and health outcomes can impact it, as well.

The broad, socioeconomic correlates of the achievement gap suggest that a multi-pronged agency and community based approach are necessary to achieve further progress in narrowing the gap. Locally, this suggests a partnership between MCPS, Montgomery County Government, and agencies and organizations supporting families aimed at collectively addressing the school and beyond school factors that contribute to the achievement gap.

To encourage more collaboration and better coordination, OLO recommends the Council ask agency and community representatives to describe their collective efforts to close the gap. Specific questions for discussion include:

- How does MCPS work with other agencies and directly with parents to address the beyond school correlates of the achievement gap?
- How does Montgomery County Government work with community-based groups to narrow the beyond school gaps that correlate with the achievement gap, such as access to high quality preschool programs?
- What are the perspectives of community-based groups on how MCPS, MCG, and other entities can work together to help narrow the achievement gap by race, ethnicity, and service group status?

## **Chapter XI: Agency Comments**

The written comments received from the Superintendent of Montgomery County Public Schools on the final draft of this Office of Legislative Oversight report are attached (pages 79-84).

This final OLO report incorporates technical corrections and comments provided by MCPS staff. As always, OLO greatly appreciates the time taken by staff to review our draft report and provide feedback.



# MONTGOMERY COUNTY PUBLIC SCHOOLS

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MARYLAND

March 8, 2013



Dr. Chris Cihlar, Director  
Dr. Elaine Bonner-Tompkins, Senior Legislative Analyst  
Montgomery County Office of Legislative Oversight  
Stella B. Werner Council Office Building  
100 Maryland Avenue  
Rockville, Maryland 20850

Dear Dr. Cihlar and Dr. Bonner-Tompkins:

Thank you for providing Montgomery County Public Schools (MCPS) staff members with the opportunity to review and provide comments on the draft Office of Legislative Oversight (OLO) report, *The Achievement Gap in Montgomery County—A FY 2013 Update*. MCPS staff members who participated in this review appreciate the collaborative process used throughout the study and review of the report. Many comments and suggestions provided by MCPS staff members during the technical review were valued and incorporated.

We are in general agreement with the findings provided in the OLO report, as they are consistent with the multiple analyses and reports MCPS has undertaken over the past decade to quantify the achievement gap and assess the success of strategies aimed at narrowing the gap. Ever since the adoption of the district's strategic plan—*Our Call to Action: Pursuit of Excellence*—MCPS has been working to narrow the achievement gap while raising the performance of all students. As the OLO report correctly concludes, we have had some successes and there are areas where the gaps have been more persistent and, in fact, have grown. Certainly this is not a challenge unique to MCPS, but as a district—and a county—dedicated to equity and social justice, we are committed to the work necessary to narrow and close the achievement gaps in all areas for all students.

The leadership and staff of MCPS and the members of the Montgomery County Board of Education are frequently engaged in strategic conversations about the achievement gap, what is working to narrow the gaps and what is not working. These conversations happen at Board meetings and Executive Leadership Team meetings, during gatherings of school staff and Professional Learning Communities, and in discussions with parents and community members throughout the county. In the past several months alone, the achievement gap—and our district's strategies for narrowing it—has been topic of several high profile discussions and strategy sessions. For example:

- The Board of Education discussed the achievement gap at length during two of its recent business meetings. The first discussion took place on December 11, 2012, when the Board received an update on the school district's progress on the Seven Keys to College

Office of the Superintendent of Schools

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and Career Readiness and the annual report on the strategic plan. More recently, on February 12, 2013, the Board received an update on the district's systematic approaches to narrowing the achievement gap;

- The achievement gap has been raised and discussed at nearly every public forum I have held since becoming superintendent on July 1, 2011. This includes 17 Listen and Learn events with community members and staff in 2011; four spring forums in 2012; and, thus far, four town hall meetings with the community this school year;
- On March 2, 2013, approximately 200 parents, staff, students and community members attended a Community Dialogue event to discuss the achievement of African American students and how we can narrow gaps that have persisted over the years;
- Narrowing the gap has also been a consistent topic during meetings about revisions of the strategic plan.

We also are reorganizing the Office of School Support and Improvement to better support schools at elementary, middle and high school levels. By targeting specific support to each school, we believe we can make significant progress in helping all children succeed. Most notably, the budget I recommended to the Board of Education in December 2012 will enable us to reenergize our efforts to narrow the achievement gap. The budget was endorsed by our employees and parents and was, ultimately, adopted by the Board of Education, with minimal changes, on February 25, 2013. The budget seeks approximately \$10 million—about 0.7 percent—above the mandatory state funding floor and most of these resources would go toward positions and programs aimed at narrowing the gap and supporting the success of our students in the future. Among the investments are:

- Funds for 30 focus teachers in middle and high schools—where our greatest gaps are seen—to help reduce mathematics and English class sizes in schools in which students are struggling in these core areas;
- Money that would be used in partnership with reallocated funds to improve mathematics instruction throughout the county and provide students with more robust learning options;
- An increase of more than \$3 million for professional development that would allow our teachers to more effectively deliver the Common Core State Standards (CCSS) and Curriculum 2.0 and prepare our students for more rigorous assessments;
- Sixty additional positions to serve students who receive English for Speakers of Other Languages and more than 100 positions to increase individualized services for special education students;
- Restorations and enhancements, including teaching positions, school psychologists, and counselors, who will support the delivery of timely, comprehensive interventions for students who are struggling. In addition, we will have a dedicated supervisor to oversee and coordinate our strategic interventions work.

This budget is now before the county executive and the County Council, who clearly share our commitment to narrowing the achievement gap. It is my hope that the Board's budget will be fully funded so we can engage in this important work together.

Over the course of many years, MCPS has employed a focused strategy of dismantling institutional barriers to rigorous coursework, disaggregating and analyzing data, and initiating conversations about ensuring equity. We have engaged in intentional—sometimes difficult—conversations about race, ethnicity and poverty. The work has yielded results, but there is much work left to be done. As the landscape is shifting, the demands on students, teachers, and schools have increased the amount of work that remains to be done and it is more important than ever that we are successful.

The OLO report is a welcome addition to the broad compendium of analyses done by MCPS staff and will contribute to our efforts to narrow the gap. While we generally concur with the findings, we do offer the following comments upon final review:

- Finding one outlines the descriptive analysis of the data performed by the OLO team. This methodology is based on a subset of data that MCPS regularly provides to parents, students, staff members, and the community. We do caution the reader to carefully consider the context to which the researcher's methodology is applied. As stated in the report, due to data limitations, OLO could not test for statistical significance in the analysis of data for this study. We believe that there is a need to determine the significance of the differences between the average scores of the groups and the associated effect sizes. In addition, when the percentages of groups are compared, the estimated standard error should be taken into account; consider both the size of the differences and the standard errors. This method has been used by the National Center for Education Statistics in their study of achievement gaps [Vanneman, A., Hamilton, L., Baldwin Anderson, J., and Rahman, T. (2009). *Achievement Gaps: How Black and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress*, (NCES 2009-455). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.] and is a more statistically sound method of examining the achievement gap. In addition to presenting the gap in numerical form, it also would be beneficial to portray the gap using a graph or diagram so that changes across all years may be viewed.

In addition we appreciate the definitions of the data points that are used in the OLO report, however, we want to caution the use of performance ratios, which can be misleading to the reader. It would be better to consistently report numbers instead of percentages. For example, Group A is three times more likely to be ready for school than Group B or Group B is just as likely as Group A to be ready for school.



In the report, the analysis of the data concludes that the rate of change in any particular measure is constant over time, which is an oversimplification. The number of years calculated to close the achievement gap does not take into account students in lower performing groups who are increasing performance at faster rates than those at the top. Thus, the estimate of the number of years to close the gap is not reliable. Additionally, this conclusion does not take into account various interventions and curricular initiatives that are implemented that increase the rate of achievement for African American and Hispanic students.

- Findings two, three, four, and five also are based on a subset of data that MCPS regularly provides to parents, students, staff members, and the community. These findings outline how MCPS has narrowed the gap on various measures. We appreciate that the report highlights MCPS efforts to look at benchmarks that exceed current grade level measures. Our alignment to CCSS, Curriculum 2.0, and the Seven Keys to College and Career Readiness indicates our commitment to closing the achievement gap compared to international standards and underscores that the MCPS commitment to this work is based on our deeply held beliefs rather than federal or state mandates. Additionally, in areas such as school readiness, proficiency on the Maryland School Assessments (MSAs), suspensions, academic ineligibility and four-year cohort graduation rates, a majority of each subgroup reached the benchmark targets. While the report identifies achievement measures that have widened among advanced measures, it should be noted that on Advanced Placement/International Baccalaureate (AP/IB) and SAT/ACT performance MCPS African American and Hispanic students significantly outperform students in the state and nation. Although we celebrate these achievements in many areas, we continue to strive to eliminate the gap in all areas of academic performance
- Finding six notes that MCPS will be transitioning from the requirements of the original *Elementary and Secondary Education Act* (ESEA) to those defined by the Maryland ESEA Waiver granted in 2012. Although there will be changes in how schools are identified by their results on state testing, it is important to remember that, as a system, MCPS remains committed to its current accountability efforts to ensure both student and school success, eliminate the achievement gap, and have a rigorous instructional program in place for every child.
- In finding seven, we believe it is premature to speculate that the gap will widen because of the implementation of the Partnership for Assessments for College and Careers (PARCC) assessments in 2014–2015. We do expect achievement to be different for all students in the early implementation of these assessments, which are replacing the current MSAs, but we are working to ensure that our students are well-prepared for these new tests. MCPS has been deliberate in its rollout of Curriculum 2.0 in anticipation of CCSS. The new curriculum is more rigorous than the previous curriculum and includes explicit

instruction in thinking and academic success skills that were not part of our previous curriculum. In addition, MCPS has expanded its investment in professional development for teachers to help them ensure that our students thrive under the new curriculum.

- In finding eight, we concur that the research base on best practices is thin and that the achievement is and has been a persistent issue for school districts across the nation. This is an area of constant focus for us as we work to learn from and replicate successful practices internally and those we can adopt externally. MCPS has become a national leader in the study and implementation of best practices. Initial groundwork has begun to review and revise our current system of accountability. This is a critical step needed to measure the effectiveness of our progress toward closing the achievement gap. Broader measures of student social-emotional learning and 21<sup>st</sup> century skills—as well as knowledge of the arts, world languages, science, and civic engagement—will provide a more complete picture of how prepared our students are for the complex world in which they live. The improved system of accountability will set the course to tell us how well our schools and our communities are doing in providing students the knowledge and skills they need to become outstanding citizens.
- MCPS continues its focus on the core competencies in which we may make a difference in addressing the achievement gap. Finding nine's focus is at the heart of where our success depends on the collaboration of the community, public and private organizations, and individuals. Our commitment is strengthened through the creation of the Office of Community Engagement and Partnerships. Through collaborative programs, such as the Judy Center Grant Partnership Programs and Linkages to Learning, comprehensive early childhood services may be provided to highly impacted families, including those with disabilities. Support for families is enhanced by these efforts. MCPS continues to collaborate with county agencies and organizations, both public and private, to strengthen programs and resources to support young children's development in all domains. Our collaboration is defined by integrating services across agencies, including community engagement, corrections, health and human services, housing, police, libraries, recreation, transportation, and others.

The school system now is poised to capitalize on our past successes and hard won lessons. Building on the systemic and cultural changes resulting from our earlier work, MCPS is shifting the equity lens from the broad focus on system and school-level data to a specific focus on each and every student. Our intent is to facilitate change at the school level, in every classroom, and for every student. Continued use and refining of such tools as the Honors/Advanced Placement Identification Tool (HAPIT), will yield important data for our continuing effort. However, there are limitations to research and data; they help us ask better questions, but knowing and meeting the needs of each and every student is key to improving student results and closing the achievement gap.



A greater focus will be placed on students' educational experience—what happens while they are in the classroom. This focus on instruction will add one of the missing links in our efforts to close the achievement gap. In addition, building a systemic continuum of interventions and supports for our students will create an educational environment conducive to equitable outcomes. These two components are critical; however, unless there is an additional element that places the school, classroom, and child within the context of the community, the effects will be muted. With a stronger engaged community committed to the well-being of every child, MCPS will move closer toward the ultimate goal of the elimination of the achievement gap.

Thank you again for the opportunity to review the draft report and discussion topics. I believe the collaborative work between MCPS and OLO will result in a productive dialogue on our collective efforts to address this important issue in Montgomery County.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Starr", is positioned above the printed name.

Joshua P. Starr, Ed.D.  
Superintendent of Schools

JPS:sln

Copy to:  
Members of the Board of Education  
Executive Staff  
Mr. Leggett  
Mrs. Navarro

### **List of Appendices**

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## **Appendix Overview**

### **Data Sources**

This appendix describes the data and data sources used in this report. As noted in the chart below, two sources of data were used for this OLO project: Montgomery County Public Schools (MCPS) data and the Maryland State Department of Education (MSDE) data.

<b>Measures</b>	<b>Data Sources and Years</b>
School Readiness	MSDE: Children Entering School Ready to Learn: Maryland Model for School Readiness, 2006-07 to 2011-12
Maryland School Assessment Scores	MSDE: Maryland Report Card, 2006-07 to 2011-12
Suspension Rates	MCPS: Annual Report on Our Call to Action, 2010 (for 2007-10 data) and 2011 (for 2011 data)
Academic Eligibility	MCPS: Rethinam and Von Secker (December 2008) for 2007 to 2008 data, Scott (October 2009) for 2009 data; Annual Report on Our Call to Action, 2011 and 2012 (for 2010 and 2011 data)
Algebra 1 by Grade 8	MCPS: Talley (October 2011) for 2010 and 2011 data; Annual Report on Our Call to Action, 2012 (for 2012 data)
AP/IB Performance among Graduates	MCPS: Annual Report on Our Call to Action, 2010 (for 2007 to 2010 data) and 2012 (for 2011 and 2012 data)
SAT/ACT Performance among Graduates	MCPS: SAT Participation and Performance Results for the Class of 2012 (for 2010 to 2012 data on SAT and ACT); SAT Results for the Classes of 2006 to 2010 (for 2007 to 2010 data)
USM/CTE Program Completion	MCPS: CTE data for 2007 to 2010 (1 minus % of Graduates who Met Diploma/Certificate Requirements Only equals % of Graduates College and/or Career Ready)
Graduation Rates	MSDE: Maryland Report Card for 2007 to 2010 data on the leaver rate calculations, and 2010 and 2011 data on four year cohort calculations
Dropout Rates	MSDE: Maryland Report Card for 2007 to 2010 data on annual dropout rates, and 2010 and 2011 data on four year cohort dropout rate

The data referenced in this appendix describe performance by race, ethnicity, and service group status. Typically, data are reported on five race and ethnicity categories (white, Asian, black, Latino, and multiracial students), and three service groups (special education, English for Speakers of Other Languages; and free and reduced price meals). Data for MSDE measures such as graduation and dropout rates are also reported for students enrolled in regular education, who are English proficient, and who do not receive FARMS.

## **Appendix Format**

Generally, three sets of data tables are reported for each measure by race, ethnicity, and service group status: performance data and trends, performance ratios, and trends in the achievement gap. Each of these sets of tables is described below.

**Performance Data and Trends:** The first sets of tables describe the overall performance of students by demographic group and changes in performance by subgroup across a three to five year period. These tables describe how students are progressing on the measures considered.

Two change metrics are reported for the performance tables by subgroup:

- Point change that describes the change in the number of students reaching a benchmark within a given time frame; and
- Percentage change that describes the change in the percent of students reaching a benchmark within a time frame and can be referred to as the rate of change.

Each of the measures reviewed described the percentage of students meeting a benchmark, so point change for this report refers to the percentage point change on a measure. For example, there was a 13 percentage point increase in the percentage of all students demonstrating school readiness between 2007 and 2012 because the overall percentage of students meeting this benchmark increased from 68 percent of all students to 81 percent. Yet, there was 19 percent increase in the percentage of all students reaching this benchmark between 2007 and 2012 that reflects the rate of increase on this measure since 2007.<sup>1</sup>

**Performance Ratios:** The second set of tables use performance ratios to describe the magnitude of the achievement gap by race, ethnicity, and service group status for the most current year with available data. Performance ratios describe the relative performance of low-performing subgroups to a high-performing subgroup by comparing the performance of each as a ratio.

- Performance ratios by race and ethnicity compare the performance of Asian, black, Latino, and multiracial students to white students; they describe how likely each subgroup performs at the same level as white students.<sup>2</sup> For example, with 86 percent of Asian students demonstrating full readiness for school in 2012 compared to 88 percent of white students, Asian kindergartners were 99% as likely as white kindergartners to demonstrate full readiness for school.<sup>3</sup>
- Performance ratios by service group compare students who receive special education, ESOL, or FARMS services to students who do not receive these services for five measures tracked by MSDE: school readiness, MSA proficiency, advanced MSA scores, graduation, and dropout rates. For the remaining project measures based on MCPS, performance ratios by service group compare students who receive special services to all students.<sup>4</sup>

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<sup>1</sup> Point change equals 2012 performance minus 2007 performance (81% - 68% = 13%); percentage change reflects the ratio of the point change between 2012 and 2007 over 2007 performance (13%/68% = 19%)

<sup>2</sup> Performance ratio equals the performance of one group divided by the performance of another group (% of Subgroup A meeting benchmark/% of Subgroup B meeting benchmark).

<sup>3</sup> Performance ratio calculated as 86%/88% = 99%

<sup>4</sup> Since all students includes students who receive special services, these performance ratios will be biased down.

**Achievement Trends:** Finally, each appendix describes changes in the achievement gap by subgroup over a three to six year period depending on available data. Since each of the measures reviewed in this report describe the percentage of students meeting specific benchmarks, the achievement gap is defined as the difference in the percentage of students meeting a benchmark.

The achievement gap by race and ethnicity is defined as the difference in performance between Asian, black, and Latino students and their white peers. The achievement gap by service group status is defined either as the difference in performance between students who receive special services and those who do not for MSDE data points or as the difference between students who receive services and all students for MCPS data points.

The achievement gap tables also describe two metrics to illustrate changes in the achievement gap over a three to six year time frame: point changes describe the numeric change in the achievement gap between two points in time and percentage change describes the rate of change in the achievement gap between two time frames. For example, the school readiness gap between regular education and special education students increased from 25 percentage points in 2007 to 31 percentage points in 2012 for a numeric increase of 6 percentage points. The 6 percentage point increase between 2007 and 2012 in the school readiness gap by special education status equals a 24 percent increase from the 2007 achievement gap of 25 points, meaning that the original achievement point gap grew by 24 percent.<sup>5</sup>

Of note, both point changes and percentage changes are utilized in this OLO appendix to describe changes in performance outcomes and the achievement gap over time.

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<sup>5</sup> Percent change in the school readiness gap by special education status equals  $(31\%-25\%)/25\% = 24\%$  for 2012.

**Appendix A**  
**School Readiness**

Source: MSDE - Children Entering School Ready to Learn: Maryland Model for School Readiness, 2006-07 to 2011-12

**Table A-1: Percent of MCPS Students Demonstrating Full School Readiness**

Groups	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point*	%*
Percent of Students Ready for School Based on Composite Score								
All Students	68	70	73	76	74	81	13	19%
School Readiness by Student Race and Ethnicity								
White Students	79	79	82	83	85	88	9	11%
Asian Students	72	76	80	81	79	86	14	19%
Black Students	61	67	67	72	69	77	16	26%
Latino Students	53	57	60	66	63	71	18	34%
Multiracial Students					79	87		
School Readiness by Student Service Group								
Special Education	45	43	48	47	47	52	7	16%
Regular Education	70	73	75	78	77	83	13	19%
ESOL	50	55	60	64	61	71	21	42%
English Proficient	76	77	79	81	81	86	10	13%
FARMS	53	59	61	66	63	71	18	34%
Non-FARMS	74	77	80	82	81	86	12	16%

**Table A-2: School Readiness Performance Ratios<sup>6</sup>**

Performance Ratios	2007	2008	2009	2010	2011	2012
Asian/White	91%	96%	98%	98%	93%	98%
Black/White	77%	85%	82%	87%	81%	88%
Latino/White	67%	72%	73%	80%	74%	81%
Multiracial/White	--	--	--	--	93%	99%
Special/Regular Ed	64%	59%	64%	60%	61%	63%
ESOL/English Proficient	66%	71%	76%	79%	75%	83%
FARMS/Non-FARMS	72%	77%	76%	80%	78%	83%

<sup>6</sup> Defined by dividing performance of two groups – e.g. Asian/White equals percent of Asian students meeting the benchmark divided by the percent of white students meeting the same benchmark (e.g. 86%/88%=99%, interpreted as Asian students are 99% as likely as white students to have demonstrated full readiness for school in 2012).

**Table A-3: Gap in Percentage of MCPS Students Demonstrating Full Readiness for School**

Differences by Subgroup	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
White - Asian	7	3	2	2	6	2	-5	-71%
White - Black	18	12	15	11	16	11	-7	-39%
White - Latino	26	22	22	17	22	17	-9	-35%
Regular Ed - Special Ed	25	30	27	31	30	31	6	24%
English Proficient - ESOL	26	22	19	17	20	15	-11	-42%
Non-FARMS - FARMS	21	18	19	16	18	15	-6	-29%

**Appendix B**

**Proficiency on Maryland School Assessments (MSA) in Grades 3, 5, 8**

Source: MSDE (Maryland Report Card)

3rd Grade Tables

**Table B-1: Third Graders Scoring Proficient or Above by Race & Ethnicity**

Students	2007	2008	2009	2010	2011*	2012*	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
All Students	84.9	86.4	88.9	87.5	89.3	88.8	3.9	5%
White	93.6	95.2	95.2	95.4	95.0	95.0	1.4	1%
Asian	92.0	92.9	94.2	94.3	94.8	94.9	2.9	3%
Black	73.4	76.1	80.4	77.7	81.0	79.1	5.7	8%
Latino	74.9	76.2	82.7	78.7	83.4	82.5	7.6	10%
Multiracial	--	--	--	--	92.4	92.0	--	--
Percent with Proficient or Above MSA Mathematics Scores								
All Students	84.1	85.6	87.2	88.1	88.9	90.2	6.1	7%
White	93.3	94.8	94.3	95.6	95.0	95.0	1.7	2%
Asian	94.9	94.4	95.1	95.4	95.0	95.0	0.1	0%
Black	69.3	71.3	76.5	78.5	78.7	80.0	10.7	15%
Latino	73.9	77.0	79.3	79.5	82.4	84.3	10.4	14%
Multiracial	--	--	--	--	90.5	93.8	--	--
*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.								

**Table B-2: Third Grade Performance Ratios for MSA Proficiency by Race & Ethnicity**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios for Reading</b>						
Asian/White	98%	98%	99%	99%	100%	100%
Black/White	78%	80%	84%	81%	85%	83%
Latino/White	80%	80%	87%	82%	88%	87%
Multiracial/White	--	--	--	--	97%	97%
<b>Performance Ratios for Mathematics</b>						
Asian/White	102%	100%	101%	100%	100%	100%
Black/White	74%	75%	81%	82%	83%	84%
Latino/White	79%	81%	84%	83%	87%	89%
Multiracial/White	--	--	--	--	95%	99%



**Table B-3: Third Grade Gap in MSA Proficiency by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Proficiency Gap in Reading								
White - Asian	1.6	2.3	1.0	1.1	0.2	0.1	-1.5	-94%
White - Black	20.2	19.1	14.8	17.7	14.0	15.9	-4.3	-21%
White - Latino	18.7	19.0	12.5	16.7	11.6	12.5	-6.2	-33%
Proficiency Gap in Mathematics								
White - Asian	-1.6	0.4	-0.8	0.2	0.0	0.0	1.6	-100%
White - Black	24.0	23.5	17.8	17.1	16.3	15.0	-9.0	-38%
White - Latino	19.4	17.8	15.0	16.1	12.6	10.7	-8.7	-45%

**Table B-4: Third Graders Scoring Proficient or Above by Service Status**

Students	2007	2008	2009	2010	2011*	2012*	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
Special Education	65.4	67.7	71.4	67.6	69.4	72.0	6.6	10%
Regular Education	87.2	88.7	90.8	89.6	91.3	90.4	3.2	4%
English Learner	67.0	65.5	78.2	73.4	78.5	79.3	12.3	18%
English Proficient	86.8	89.3	90.6	90.2	91.5	91.3	4.5	5%
FARMS	69.9	71.9	78.4	75.1	80.1	78.5	8.6	12%
Non-FARMS	90.6	92.3	93.5	93.4	94.0	94.1	3.5	4%
Percent with Proficient or Above MSA Math Scores								
Special Education	56.7	62.1	59.1	63.3	63.8	64.3	7.6	13%
Regular Education	87.3	88.4	90.2	90.8	91.5	92.8	5.5	6%
English Learner	65.0	69.4	72.9	74.7	76.6	80.8	15.8	24%
English Proficient	86.1	87.8	89.4	90.8	91.5	92.8	6.7	8%
FARMS	68.0	70.1	75.3	76.3	77.9	80.3	12.3	18%
Non-FARMS	90.1	91.8	92.3	93.8	94.6	95.0	4.9	5%
*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.								

**Table B-5: Third Grade Performance Ratios for MSA Proficiency by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios for Reading</b>						
Special Ed/Regular Ed	75%	76%	79%	75%	76%	80%
ESOL/English Proficient	77%	73%	86%	81%	86%	87%
FARMS/Non-FARMS	77%	78%	84%	80%	85%	83%
<b>Performance Ratios for Mathematics</b>						
Special Ed/Regular Ed	65%	70%	66%	70%	70%	69%
ESOL/English Proficient	75%	79%	82%	82%	84%	87%
FARMS/Non-FARMS	75%	76%	82%	81%	82%	85%

**Table B-6: Third Grade Gap in MSA Proficiency by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
MSA Proficiency Gap in Reading								
Regular Ed - Special Ed	21.8	21.0	19.4	22.0	21.9	18.4	-3.4	-16%
English Proficient - ESOL	19.8	23.8	12.4	16.8	13.0	12.0	-7.8	-39%
Non-FARMS - FARMS	20.7	20.4	15.1	18.3	13.9	15.6	-5.1	-25%
MSA Proficiency Gap in Mathematics								
Regular Ed - Special Ed	30.6	26.3	31.1	27.5	27.7	28.5	-2.1	-7%
English Proficient - ESOL	21.1	18.4	16.5	16.1	14.9	12	-9.1	-43%
Non-FARMS - FARMS	22.1	21.7	17	17.5	16.7	14.7	-7.4	-34%

5<sup>th</sup> Grade Tables

**Table B-7: Fifth Graders Scoring Proficient or Above by Race & Ethnicity**

Students	2007	2008	2009	2010	2011*	2012*	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
All Students	83.4	91.2	93.0	94.1	94.1	93.5	10.1	12%
White	93.5	96.8	97.7	97.8	95.0	95.0	1.5	2%
Asian	91.4	96.1	96.1	96.6	95.0	95.0	3.6	4%
Black	72.2	84.6	88.0	87.5	89.1	87.9	15.7	22%
Latino	69.9	84.7	87.6	87.7	90.8	89.5	19.6	28%
Multiracial	--	--	--	--	95.0	95.0	--	--
Percent with Proficient or Above MSA Mathematics Scores								
All Students	84.1	86.3	85.5	85.9	86.2	87.6	3.5	4%
White	93.6	94.4	94.3	94.1	95.0	95.0	1.4	2%
Asian	94.5	95.6	95.9	96.2	94.5	95.0	0.5	0.5%
Black	69.0	75.5	72.2	73.8	74.5	77.0	8.0	12%
Latino	73.5	76.8	76.0	76.8	78.0	79.0	5.5	8%
Multiracial	--	--	--	--	91.0	93.7	2.7	--
*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.								

**Table B-8: Fifth Grade Performance Ratios for MSA Proficiency by Race & Ethnicity**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios for Reading</b>						
Asian/White	98%	99%	98%	99%	100%	100%
Black/White	77%	87%	90%	89%	94%	93%
Latino/White	75%	88%	90%	90%	96%	94%
Multiracial/White	--	--	--	--	100%	100%
<b>Performance Ratios for Mathematics</b>						
Asian/White	101%	101%	102%	102%	99%	100%
Black/White	74%	80%	77%	78%	78%	81%
Latino/White	79%	81%	81%	82%	82%	83%
Multiracial/White	--	--	--	--	96%	99%

**Table B-9: Fifth Grade Gap in MSA Proficiency by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2011-12 Change	
							Point	%
Proficiency Gap in Reading								
White - Asian	2.1	0.7	1.6	1.2	0.0	0.0	-2.1	-100%
White - Black	21.3	12.2	9.7	10.3	5.9	7.1	-14.2	-67%
White - Latino	23.6	12.1	10.1	10.1	4.2	5.5	-18.1	-77%
Proficiency Gap in Mathematics								
White - Asian	-0.9	-1.2	-1.6	-2.1	0.5	0.0	0.9	-100%
White - Black	24.6	18.9	22.1	20.3	20.5	18.0	-6.6	-27%
White - Latino	20.1	17.6	18.3	17.3	17.0	16.0	-4.1	-20%

**Table B-10: Fifth Graders Scoring Proficient or Above by Service Status**

Students	2007	2008	2009	2010	2011*	2012*	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
Special Education	61.6	75.1	78.8	76.2	77.3	78.4	16.8	27%
Regular Education	86.7	93.5	94.9	95.0	95.0	95.0	8.3	10%
English Learner	50.6	75.0	77.5	78.9	79.2	79.7	29.1	58%
English Proficient	85.7	92.4	94.0	94.1	95.0	95.0	9.3	11%
FARMS	65.4	81.9	85.7	84.7	87.3	86.4	21.0	32%
Non-FARMS	90.3	94.9	95.0	95.0	95.0	95.0	4.7	5%
Percent with Proficient or Above MSA Math Scores								
Special Education	56.6	58.2	58.8	60.6	64.5	65.5	8.9	16%
Regular Education	88.1	90.3	88.9	89.1	88.8	90.3	2.2	3%
English Learner	59.4	66.1	68.7	67.2	65.6	64.7	5.3	9%
English Proficient	85.8	87.8	86.6	87.3	88.1	90.6	4.8	6%
FARMS	67.6	72.2	71.8	72.6	73.4	74.9	7.3	11%
Non-FARMS	90.4	92.0	91.1	92.2	92.3	94.0	3.6	4%
*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.								

\*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.

**Table B-11: Fifth Grade Performance Ratios for MSA Proficiency by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios for Reading</b>						
Special Ed/Regular Ed	71%	80%	83%	80%	81%	83%
ESOL/English Proficient	59%	81%	82%	84%	83%	84%
FARMS/Non-FARMS	72%	86%	90%	89%	92%	91%
<b>Performance Ratios for Mathematics</b>						
Special Ed/Regular Ed	64%	64%	66%	68%	73%	73%
ESOL/English Proficient	88%	92%	96%	93%	89%	86%
FARMS/Non-FARMS	75%	78%	79%	79%	80%	80%

**Table B-12: Fifth Grade Gap in MSA Proficiency by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Proficiency Gap in Reading								
Regular Ed - Special Ed	25.1	18.4	16.1	18.8	17.7	16.6	-8.5	-34%
English Proficient - ESOL	35.1	17.4	16.5	15.2	15.8	15.3	-19.8	-56%
Non-FARMS - FARMS	24.9	13.0	9.3	10.3	7.7	8.6	-16.3	-66%
Proficiency Gap in Mathematics								
Regular Ed - Special Ed	31.5	32.1	30.1	28.5	24.3	24.8	-6.7	-21%
English Proficient - ESOL	26.4	21.7	17.9	20.1	22.5	25.9	-0.5	-2%
Non-FARMS - FARMS	22.8	19.8	19.3	19.6	18.9	19.1	-3.7	-16%

8th Grade Tables

**Table B-13: Eighth Graders Scoring Proficient or Above by Race & Ethnicity**

Students	2007	2008	2009	2010	2011*	2012*	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
All Students	77.1	83.3	87.4	88.0	89.2	87.6	10.5	14%
White	90.8	93.9	95.4	95.2	95.0	95.0	4.2	5%
Asian	86.7	92.6	94.3	95.1	94.6	95.0	8.3	10%
Black	61.8	71.5	79.8	80.4	82.3	78.8	17	28%
Latino	58.5	67.9	76.2	77.9	80.4	78.1	19.6	33%
Multiracial	--	--	--	--	94.3	94.8	--	--
Percent with Proficient or Above MSA Mathematics Scores								
All Students	67.4	73.2	74.4	75.0	74.7	76.7	9.3	14%
White	84.2	87.7	89.0	88.8	89.1	91.0	6.8	8%
Asian	86.5	90.5	90.7	91.7	90.7	93.6	7.1	8%
Black	43.0	51.1	55.0	57.3	58.5	59.7	16.7	39%
Latino	45.9	55.8	57.3	57.5	58.4	59.5	13.6	30%
Multiracial	--	--	--	--	80.8	85.5	--	--
*Scores above 95% not reported for 2011 or 2012 due to federal privacy regulations. For analysis 95% used.								

**Table B-14: Eighth Grade Performance Ratios for MSA Proficiency by Race & Ethnicity**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios in Reading</b>						
Asian/White	95%	99%	99%	100%	100%	100%
Black/White	68%	76%	84%	84%	87%	83%
Latino/White	64%	72%	80%	82%	85%	82%
Multiracial/White	--	--	--	--	99%	100%
<b>Performance Ratios in Mathematics</b>						
Asian/White	103%	103%	102%	103%	102%	103%
Black/White	51%	58%	62%	65%	66%	66%
Latino/White	55%	64%	64%	65%	66%	65%
Multiracial/White	--	--	--	--	91%	94%

**Table B-15: Eighth Grade Gap in MSA Proficiency by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2011-12 Change	
							Point	%
MSA Proficiency Gap in Reading								
White - Asian	4.1	1.3	1.1	0.1	0.4	0.0	-4.1	-100%
White - Black	29.0	22.4	15.6	14.8	12.7	16.2	-12.8	-44%
White - Latino	32.3	26.0	19.2	17.3	14.6	16.9	-15.4	-48%
MSA Proficiency Gap in Mathematics								
White - Asian	-2.3	-2.8	-1.7	-2.9	-1.6	-2.6	-0.3	13%
White - Black	41.2	36.6	34.0	31.5	30.6	31.3	-9.9	-24%
White - Latino	38.3	31.9	31.7	31.3	30.7	31.5	-6.8	-18%

**Table B-16: Eighth Graders Scoring Proficient or Above by Service Group**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Proficient or Above MSA Reading Scores								
Special Education	42.6	52.2	64.6	68.7	69.2	65.7	23.1	54%
Regular Education	81.8	87.2	90.6	90.4	91.6	90.3	8.5	10%
English Learner	27.7	32.7	44.3	48.0	48.6	45.9	18.2	66%
English Proficient	79.0	85.0	88.9	89.2	90.4	89.2	10.2	13%
FARMS	52.9	63.0	73.2	75.3	77.6	74.3	21.4	41%
Non-FARMS	85.0	90.3	92.7	93.1	94.4	93.6	8.6	10%
Percent with Proficient or Above MSA Math Scores								
Special Education	32.5	34.6	41.9	42.0	39.2	45.1	12.6	39%
Regular Education	72.2	78.1	78.9	79.3	79.1	80.4	8.2	11%
English Learner	30.7	39.9	34.8	30.4	35.8	44.6	13.9	45%
English Proficient	68.9	74.4	75.8	76.5	76.0	78.0	9.1	13%
FARMS	38.8	48.1	52.3	52.5	53.4	53.6	14.8	38%
Non-FARMS	76.9	81.7	82.7	84.2	84.4	86.9	10.0	13%

**Table B-17: Eighth Grade Performance Ratios for MSA Proficiency by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>MSA Performance Ratios in Reading</b>						
Special Ed/Regular Ed	52%	60%	71%	76%	76%	73%
ESOL/English Proficient	35%	38%	50%	54%	54%	51%
FARMS/Non-FARMS	62%	70%	79%	81%	82%	79%
<b>MSA Performance Ratios in Mathematics</b>						
Special Ed/Regular Ed	45%	44%	53%	53%	50%	56%
ESOL/English Proficient	45%	54%	46%	40%	47%	57%
FARMS/Non-FARMS	50%	59%	63%	62%	63%	62%

**Table B-18: Eighth Grade Gap in MSA Proficiency by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
MSA Proficiency Gap in Reading								
Regular Ed - Special Ed	39.2	35.0	26.0	21.7	22.4	24.6	-14.6	-37%
English Proficient - ESOL	51.3	52.3	44.6	41.2	41.8	43.3	-8.0	-16%
Non-FARMS - FARMS	32.1	27.3	19.5	17.8	16.8	19.3	-12.8	-40%
MSA Proficiency Gap in Mathematics								
Regular Ed - Special Ed	39.7	43.5	37.0	37.3	39.9	35.3	-4.4	-11%
English Proficient - ESOL	38.2	34.5	41.0	46.1	40.2	33.4	-4.8	-13%
Non-FARMS - FARMS	38.1	33.6	30.4	31.7	31.0	33.3	-4.8	-13%

Appendix C

Advanced MSA Performance in Grades 3, 5, 8

Source: MSDE – The Maryland Report Card

3rd Grade Tables

Table C-1: Third Graders Scoring Advanced on MSA by Race & Ethnicity

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Advanced MSA Reading Scores								
All Students	26.1	22.3	28.1	28.0	26.4	26.1	0.0	0%
White	39.7	34.4	41.1	41.5	39.9	39.2	-0.5	-1%
Asian	36.4	31.4	40.1	38.9	38.2	38.8	2.4	7%
Black	10.0	8.3	12.9	15.0	12.5	11.7	1.7	17%
Latino	8.6	8.2	11.1	9.8	11.2	10.3	1.7	20%
Multiracial	--	--	--	--	30.7	34.6	--	--
Percent with Advanced MSA Mathematics Scores								
All Students	35.0	33.6	34.1	41.3	41.8	44.3	9.3	27%
White	49.4	47.4	46.5	56.5	58.2	60.6	11.2	23%
Asian	53.6	53.2	54.6	60.8	63.1	65.3	11.7	22%
Black	14.5	13.6	16.5	22.2	21.0	24.1	9.6	66%
Latino	14.6	14.9	14.4	19.7	20.6	23.8	9.2	63%
Multiracial	--	--	--	--	53.2	54.5	--	--

Table C-2: Third Grade Advanced MSA Performance Ratios by Race & Ethnicity

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios in Reading</b>						
Asian/White	92%	91%	98%	94%	96%	99%
Black/White	25%	24%	31%	36%	31%	30%
Latino/White	22%	24%	27%	24%	28%	26%
Multiracial/White	--	--	--	--	77%	88%
<b>Performance Ratios in Mathematics</b>						
Asian/White	109%	112%	117%	108%	108%	108%
Black/White	29%	29%	35%	39%	36%	40%
Latino/White	30%	31%	31%	35%	35%	39%
Multiracial/White	--	--	--	--	91%	90%



**Table C-3: Third Grade Gap in Advanced MSA Scores by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
MSA Advanced Score Gap in Reading								
White - Asian	3.3	3.0	1.0	2.6	1.7	0.4	-2.9	-88%
White - Black	29.7	26.1	28.2	26.5	27.4	27.5	-2.2	-7%
White - Latino	31.1	26.2	30.0	31.7	28.7	28.9	-2.2	-7%
MSA Advanced Score Gap in Mathematics								
White - Asian	-4.2	-5.8	-8.1	-4.3	-4.9	-4.7	-0.5	12%
White - Black	34.9	33.8	30.0	34.3	37.2	36.5	1.6	5%
White - Latino	34.8	32.5	32.1	36.8	37.6	36.8	2.0	6%

**Table C-4: Third Grade Advanced MSA Scores by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Advanced Scores in Reading								
All Students	26.1	22.3	28.1	28.0	26.4	26.1	0.0	0%
Special Ed	9.2	8.2	11.5	10.8	11.3	9.2	0.0	0%
Regular Ed	28.1	24.0	29.8	29.9	28.0	27.7	-0.4	-1%
English Learner	5.0	5.0	5.3	5.5	5.0	5.0	0.0	0%
English Proficient	28.6	24.9	31.5	32.4	30.9	31.9	3.3	12%
FARMS	6.4	5.8	9.0	8.7	9.1	8.5	2.1	33%
Non-FARMS	33.6	29.0	36.4	37.4	35.3	35.2	1.6	5%
Percent with Advanced Scores in Mathematics								
All Students	35.0	33.6	34.1	41.3	41.8	44.3	9.3	27%
Special Ed	13.8	14.6	12.5	14.6	17.5	15.6	1.8	13%
Regular Ed	37.5	35.8	36.4	44.1	44.3	47.2	9.7	26%
English Learner	8.4	9.3	7.7	13.7	13.3	16.1	7.7	92%
English Proficient	37.9	36.9	38.1	46.7	47.7	51.9	14.0	37%
FARMS	12.1	11.2	13.0	17.3	17.9	21.2	9.1	75%
Non-FARMS	43.7	42.6	43.2	52.8	54.0	56.3	12.6	29%

**Table C-5: Third Grade Advanced MSA Performance Ratios by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Performance Ratios in Reading</b>						
Special Ed/Regular Ed	33%	34%	39%	36%	40%	33%
ESOL/English Proficient	17%	20%	17%	17%	16%	16%
FARMS/Non-FARMS	19%	20%	25%	23%	26%	24%
<b>Performance Ratios in Mathematics</b>						
Special Ed/Regular Ed	37%	41%	34%	33%	40%	33%
ESOL/English Proficient	22%	25%	20%	29%	28%	31%
FARMS/Non-FARMS	28%	26%	30%	33%	33%	38%

**Table C-6: Third Grade Gap in Advanced MSA Scores by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Advanced Score Gap in Reading								
Regular-Special	18.9	15.8	18.3	19.1	16.7	18.5	-0.4	-2%
English Proficient - ESOL	23.6	19.9	26.5	27.4	25.9	26.9	3.3	14%
Non-FARMS - FARMS	27.2	23.2	27.4	28.7	26.2	26.7	-0.5	-2%
Advanced Score Gap in Mathematics								
Regular-Special	23.7	21.2	23.9	29.5	26.8	31.6	7.9	33%
English Proficient - ESOL	29.5	27.6	30.4	33.0	34.4	35.8	6.3	21%
Non-FARMS - FARMS	31.6	31.4	30.2	35.5	36.1	35.1	3.5	11%

5<sup>th</sup> Grade Tables

**Table C-7: Fifth Graders Scoring Advanced on MSA by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Advanced Reading Scores								
All Students	44.7	60.8	60.1	62.6	66.0	65.0	20.3	45%
White	62.9	79.0	77.0	79.8	83.3	81.8	18.9	30%
Asian	58.0	74.0	72.7	75.8	78.0	79.1	21.1	36%
Black	24.8	42.4	41.4	45.4	48.8	46.9	22.1	89%
Latino	20.4	38.3	39.6	40.5	47.0	45.9	25.5	125%
Multiracial	--	--	--	--	75.9	75.7	--	--
Percent with Advanced Mathematics Scores								
All Students	30.7	34.0	34.9	34.4	33.1	39.1	8.4	27%
White	44.2	47.8	49.2	47.3	45.9	53.9	9.7	22%
Asian	50.6	56.1	57.0	57.7	56.6	63.2	12.6	25%
Black	10.2	14.7	14.6	15.2	14.6	17.8	7.6	75%
Latino	11.2	14.2	14.5	15.2	15.5	19.9	8.7	78%
Multiracial	--	--	--	--	41.7	48.4	--	--

**Table C-8: Fifth Grade Advanced MSA Performance Ratios by Race & Ethnicity**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>MSA Advanced Performance Ratios in Reading</b>						
Asian/White	92%	94%	94%	95%	94%	97%
Black/White	39%	54%	54%	57%	59%	57%
Latino/White	32%	48%	51%	51%	56%	56%
Multiracial/White	--	--	--	--	91%	93%
<b>MSA Advanced Performance Ratios in Mathematics</b>						
Asian/White	114%	117%	116%	122%	123%	117%
Black/White	23%	31%	30%	32%	32%	33%
Latino/White	25%	30%	29%	32%	34%	37%
Multiracial/White	--	--	--	--	91%	90%

**Table C-9: Fifth Grade Gap in Advanced MSA Scores by Race & Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2007-12 Chg	
							Point	%
Advanced Score Gap in Reading								
White - Asian	4.9	5.0	4.3	4.0	5.3	2.7	-2.2	-45%
White - Black	38.1	36.6	35.6	34.4	34.5	34.9	-3.2	-8%
White - Latino	42.5	40.7	37.4	39.3	36.3	35.9	-6.6	-16%
Advanced Score Gap in Mathematics								
White - Asian	-6.4	-8.3	-7.8	-10.4	-10.7	-9.3	-2.9	45%
White - Black	34.0	33.1	34.6	32.1	31.3	36.1	2.1	6%
White - Latino	33.0	33.6	34.7	32.1	30.4	34.0	1.0	3%

**Table C-10: Fifth Graders Scoring Advanced on MSA by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Advanced Reading Scores								
Special Education	19.0	28.8	28.6	29.3	32.7	32.0	13.0	68%
Regular Education	48.5	65.3	64.1	66.8	69.9	69.0	20.5	42%
ESOL	5.6	23.4	23.1	19.6	19.6	20.3	14.7	263%
English Proficient	47.4	63.6	62.4	65.7	70.1	70.7	23.3	49%
FARMS	17.0	34.0	34.9	36.8	40.6	40.0	23.0	135%
Non-FARMS	55.3	71.5	70.3	74.6	78.1	77.4	22.1	40%
Percent with Advanced Mathematics Scores								
Special Education	10.1	9.6	8.5	10.4	11.0	11.1	1.0	10%
Regular Education	33.7	37.5	38.3	37.5	35.8	42.5	8.8	26%
ESOL	7.4	10.8	12.8	9.2	7.0	9.0	1.6	22%
English Proficient	32.2	35.8	36.3	36.3	35.5	43.0	10.8	34%
FARMS	8.4	11.8	12.5	12.9	12.2	15.3	6.9	82%
Non-FARMS	39.2	43.0	44.1	44.5	43.2	51.0	11.8	30%

**Table C-11: Fifth Grade Advanced MSA Performance Ratios by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>MSA Advanced Performance Ratios in Reading</b>						
Special Ed/Regular Ed	39%	44%	45%	44%	47%	46%
ESOL/English Proficient	12%	37%	37%	30%	28%	29%
FARMS/Non-FARMS	31%	48%	50%	49%	52%	52%
<b>MSA Advanced Performance Ratios in Mathematics</b>						
Special Ed/Regular Ed	30%	26%	22%	28%	31%	26%
ESOL/English Proficient	23%	30%	35%	25%	20%	21%
FARMS/Non-FARMS	21%	27%	28%	29%	28%	30%

**Table C-12: Fifth Grade Gap in Advanced MSA Scores by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
MSA Advanced Score Gap in Reading								
Regular Ed - Special Ed	29.5	36.5	35.5	37.5	37.2	37.0	7.5	25%
English Proficient - ESOL	41.8	40.2	39.3	46.1	50.5	50.4	8.6	21%
Non-FARMS - FARMS	38.3	37.5	35.4	37.8	37.5	37.4	-0.9	-2%
MSA Advanced Score Gap in Mathematics								
Regular Ed - Special Ed	23.6	27.9	29.8	27.1	24.8	31.4	7.8	33%
English Proficient - ESOL	24.8	25.0	23.5	27.1	28.5	34.0	9.2	37%
Non-FARMS - FARMS	30.8	31.2	31.6	31.6	31.0	35.7	4.9	16%

## 8<sup>th</sup> Grade Tables

**Table C-13: Eighth Graders Scoring Advanced by Race and Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2011-12 Change	
							Point	%
Percent with Advanced MSA Reading Scores								
All Students	33.6	49.1	47.9	57.4	57.2	56.1	22.5	67%
White	49.0	68.3	64.2	73.6	75.7	74.2	25.2	51%
Asian	45.8	63.7	60.9	72.3	72.7	73.8	28.0	61%
Black	15.7	28.1	32.7	39.6	38.9	37.9	22.2	141%
Latino	12.5	22.6	25.0	37.1	35.9	34.3	21.8	174%
Multiracial	--	--	--	--	70.3	64.6	--	--
Percent with Advanced MSA Math Scores								
All Students	36.3	40.6	38.7	40.5	42.7	42.5	6.2	17%
White	51.8	56.5	55.4	58.1	61.7	62.5	10.7	21%
Asian	59.3	66.1	63.4	65.6	66.6	68.5	9.2	16%
Black	13.3	16.7	16.0	17.1	20.3	18.8	5.5	41%
Latino	13.1	16.8	15.6	16.0	20.3	17.7	4.6	35%
Multiracial	--	--	--	--	51.0	46.7	--	--

**Table C-14: Eighth Grade Advanced MSA Performance Ratios by Race and Ethnicity**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Advanced Score Performance Ratios in Reading</b>						
Asian/White	93%	93%	95%	98%	96%	99%
Black/White	32%	41%	51%	54%	51%	51%
Latino/White	26%	33%	39%	50%	47%	46%
Multiracial/White	--	--	--	--	93%	87%
<b>Advanced Score Performance Ratios in Mathematics</b>						
Asian/White	114%	117%	114%	113%	108%	110%
Black/White	26%	30%	29%	29%	33%	30%
Latino/White	25%	30%	28%	28%	33%	28%
Multiracial/White	--	--	--	--	83%	75%

**Table C-15: Eighth Grade Gap in Advanced MSA Scores by Race and Ethnicity**

Students	2007	2008	2009	2010	2011	2012	2011-12 Change	
							Point	%
Advanced Score Gap in Reading								
White - Asian	3.2	4.6	3.3	1.3	3.0	0.4	-2.8	-87%
White - Black	33.3	40.2	31.5	34.0	36.8	36.3	3.0	9%
White - Latino	36.5	45.7	39.2	36.5	39.8	39.9	3.4	9%
Advanced Score Gap in Mathematics								
White - Asian	-7.5	-9.6	-8.0	-7.5	-4.9	-6.0	1.5	-20%
White - Black	38.5	39.8	39.4	41.0	41.4	43.7	5.2	14%
White - Latino	38.7	39.7	39.8	42.1	41.4	44.8	6.1	16%

**Table C-16: Eighth Graders Scoring Advanced on MSA by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Percent with Advanced Reading Scores								
Special Education	9.3	15.6	16.7	23.7	22.9	20.4	11.1	119%
Regular Education	37.0	53.4	52.2	61.8	61.4	60.4	23.4	63%
English Learner	5.0	5.0	5.0	11.0	8.4	11.2	6.2	124%
English Proficient	34.8	50.6	49.4	58.9	58.7	57.8	23.0	66%
FARMS	9.8	18.7	23.6	32.2	30.6	28.4	18.6	190%
Non-FARMS	41.4	59.4	56.9	67.7	69.2	68.4	27.0	65%
Percent with Advanced Math Scores								
Special Education	9.3	10.0	10.2	11.5	10.9	11.2	1.9	20%
Regular Education	40.0	44.6	42.6	44.2	46.7	46.2	6.2	16%
English Learner	12.0	9.9	8.5	9.9	11.1	13.5	1.5	13%
English Proficient	37.3	41.7	39.7	41.5	43.8	43.7	6.4	17%
FARMS	11.3	12.7	13.5	13.9	15.2	13.8	2.5	22%
Non-FARMS	44.6	50.1	48.0	51.3	55.2	55.2	10.6	24%

**Table C-17: Eighth Grade Advanced MSA Performance Ratios by Service Status**

Performance Ratios	2007	2008	2009	2010	2011	2012
<b>Advanced Score Performance Ratios in Reading</b>						
Special Ed/Regular Ed	25%	29%	32%	38%	37%	34%
ESOL/English Proficient	14%	10%	10%	19%	14%	19%
FARMS/Non-FARMS	24%	31%	41%	48%	44%	42%
<b>Advanced Score Performance Ratios in Mathematics</b>						
Special Ed/Regular Ed	23%	22%	24%	26%	23%	24%
ESOL/English Proficient	32%	24%	21%	24%	25%	31%
FARMS/Non-FARMS	25%	25%	28%	27%	28%	25%

**Table C-18: Eighth Grade Gap in Advanced MSA Scores by Service Status**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
Advanced Score Gap in Reading								
Regular Ed - Special Ed	27.7	37.8	35.5	38.1	38.5	40.0	12.3	44%
English Proficient - ESOL	29.8	45.6	44.4	47.9	50.3	46.6	16.8	56%
Non-FARMS - FARMS	31.6	40.7	33.3	35.5	38.6	40.0	8.4	27%
Advanced Score Gap in Mathematics								
Regular Ed - Special Ed	30.7	34.6	32.4	32.7	35.8	35.0	4.3	14%
English Proficient - ESOL	25.3	31.8	31.2	31.6	32.7	30.2	4.9	19%
Non-FARMS - FARMS	33.3	37.4	34.5	37.4	40.0	41.4	8.1	24%

**Appendix D**  
**Suspension Rates**

(% of Students with One or More Out of School Suspensions)

Source: MCPS

**Table D-1: Elementary Suspension Rates by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
All Students	1.4	1.2	0.6	0.6	0.6	-0.8	-57%
White	0.6	0.6	0.3	0.3	0.2	-0.4	-67%
Asian	0.4	0.4	0.1	0.2	0.2	-0.2	-50%
Black	3.2	3	1.5	1.4	1.3	-1.9	-59%
Latino	1.5	1.2	0.7	0.5	0.6	-0.9	-60%
Multiracial	--	--	--	--	0.7	--	--
Special Education	3.7	3.7	2.2	2.3	2.3	-1.4	-38%
ESOL	1.2	0.8	0.5	0.3	0.5	-0.7	-58%
FARMS	2.8	2.4	1.3	1.1	1.1	-1.7	-61%

**Table D-2: Elementary Suspension Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011
Asian/White	67%	67%	33%	67%	100%
Black/White	533%	500%	500%	467%	650%
Latino/White	250%	200%	233%	167%	300%
Multiracial/White	--	--	--	--	350%
Special Education/All	264%	308%	367%	383%	383%
ESOL/All	86%	67%	83%	50%	83%
FARMS/All	200%	200%	217%	183%	183%

**Table D-3: Elementary Suspension Gap by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
White - Asian	0.2	0.2	0.2	0.1	0.0	-0.2	-100%
White - Black	-2.6	-2.4	-1.2	-1.1	-1.1	-1.5	-58%
White - Latino	-0.9	-0.6	-0.4	-0.2	-0.4	-0.7	-78%
All - Special Education	-2.3	-2.5	-1.6	-1.7	-1.7	0.6	-26%
All - ESOL	0.2	0.4	0.1	0.3	0.1	-0.1	-50%
All - FARMS	-1.4	-1.2	-0.7	-0.5	-0.5	0.9	-64%

**Table D-4: Middle School Suspension Rates by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
All Students	7.4	6.4	3.7	3.9	4.1	-3.3	-45%
White	3.1	3.1	1.5	1.8	1.7	-1.4	-45%
Asian	2.7	2	1.1	0.9	1.4	-1.3	-48%
Black	16.3	13.5	8.2	8.3	8.8	-7.5	-46%
Latino	9.3	8.4	4.7	4.9	4.8	-4.5	-48%
Multiracial	--	--	--	--	4.3	--	--
Special Education	15.2	13.1	8.5	9.2	10.8	-4.4	-29%
ESOL	8.0	8.3	3.8	4.8	4.2	-43.8	-48%
FARMS	15.2	12.6	7.5	7.7	8.3	-6.9	-45%

**Table D-5: Middle School Suspension Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011
Asian/White	87%	65%	73%	50%	82%
Black/White	526%	435%	547%	461%	518%
Latino/White	300%	271%	313%	272%	282%
Multiracial/White	--	--	--	--	253%
Special Education/All	205%	205%	230%	236%	263%
ESOL/All	108%	130%	103%	123%	102%
FARMS/All	205%	197%	203%	197%	202%

**Table D-6: Middle School Suspension Gap by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
White - Asian	0.4	1.1	0.4	0.9	0.3	-0.1	-25%
White - Black	-13.2	-10.4	-6.7	-6.5	-7.1	6.1	-46%
White - Latino	-6.2	-5.3	-3.2	-3.1	-3.1	3.1	-50%
All - Special Education	-7.8	-6.7	-4.8	-5.3	-6.7	1.1	-14%
All - ESOL	-0.6	-1.9	-0.1	-0.9	-0.1	0.5	-83%
All - FARMS	-7.8	-6.2	-3.8	-3.8	-4.2	3.6	-46%



**Table D-7: High School Suspension Rates by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
All Students	6.6	6.0	4.1	3.9	4.4	-2.2	-33%
White	3.4	2.9	2.2	1.7	2.1	-1.3	-38%
Asian	2.3	2.0	1.2	1.1	0.9	-1.4	-61%
Black	13.3	12.1	8.4	8.6	9.8	-3.5	-26%
Latino	9.4	8.3	5.1	5.0	5.0	-4.4	-47%
Multiracial	--	--	--	--	4.0	--	--
Special Education	14.2	13.7	9.1	9.3	9.6	-4.6	-32%
ESOL	7.8	5.6	4.2	4.3	5.0	-2.8	-36%
FARMS	13	11.7	8.3	8.2	8.5	-4.5	-35%

**Table D-8: High School Suspension Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011
Asian/White	68%	69%	55%	65%	43%
Black/White	391%	417%	382%	506%	467%
Latino/White	276%	286%	232%	294%	238%
Multiracial/White	--	--	--	--	190%
Special Education/All	215%	228%	222%	238%	218%
ESOL/All	118%	93%	102%	110%	114%
FARMS/All	197%	195%	202%	210%	193%

**Table D-9: High School Suspension Rates by Gaps by Subgroups**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
White - Asian	1.1	0.9	1	0.6	1.2	0.1	9%
White - Black	-9.9	-9.2	-6.2	-6.9	-7.7	2.2	-22%
White - Latino	-6	-5.4	-2.9	-3.3	-2.9	3.1	-52%
All - Special Education	-7.6	-7.7	-5.0	-5.4	-5.2	2.4	-32%
All - ESOL	-1.2	0.4	-0.1	-0.4	-0.6	0.6	-50%
All - FARMS	-6.4	-5.7	-4.2	-4.3	-4.1	2.3	-36%

## Appendix E

**Academic Ineligibility**

(% of Students Academically Ineligible Three out of Four Quarters)

Source: MCPS

**Table E-1: Middle School Ineligibility Rates by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
All Students	9.2	8.0	6.6	5.3	5.2	-4.0	-43%
White	2.8	2.3	2.0	1.6	1.5	-1.3	-46%
Asian	2.6	2.1	1.1	0.9	0.9	-1.7	-65%
Black	18.4	16.5	12.3	10.1	9.5	-8.9	-48%
Latino	18.1	15.3	13.7	10.4	10.0	-8.1	-45%
Multiracial	--	--	--	--	3.7	--	--
Special Education	20.6	18.6	15.7	12.4	13.5	-7.1	-34%
ESOL	14.4	11.9	7.9	9.5	10.2	-4.2	-2%
FARMS	22.1	19.0	15.7	12.1	12.0	-10.1	-46%

**Table E-2: Middle School Ineligibility Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011
Asian/White	93%	91%	55%	56%	60%
Black/White	657%	717%	615%	631%	633%
Latino/White	646%	665%	685%	650%	667%
Multiracial/White	--	--	--	--	247%
Special Ed/All	224%	233%	238%	234%	260%
ESOL/All	157%	149%	120%	179%	196%
FARMS/All	240%	238%	238%	228%	231%

**Table E-3: Middle School Ineligibility Gap by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
White - Asian	0.2	0.2	0.9	0.7	0.6	0.4	200%
White - Black	-15.6	-14.2	-10.3	-8.5	-8.0	7.6	-49%
White - Latino	-15.3	-13.0	-11.7	-8.8	-8.5	6.8	-44%
All - Special Education	-11.4	-10.6	-9.1	-7.1	-8.3	3.1	-27%
All - ESOL	-5.2	-3.9	-1.3	-4.2	-5.0	0.2	-4%
All - FARMS	-12.9	-11.0	-9.1	-6.8	-6.8	6.1	-47%

**Table E-4: High School Ineligibility Rates by Subgroup**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
All Students	14.9	14.0	13.0	12.5	13.4	-1.5	-10%
White	6.3	5.8	5.6	4.8	5.0	-1.3	-21%
Asian	6.9	6.0	5.1	4.4	4.6	-2.3	-33%
Black	26.1	24.9	21.4	21.0	21.4	-4.7	-18%
Latino	30.4	27.2	26.1	25.0	26.5	-3.9	-13%
Special Education	30.3	28.0	27.0	25.9	25.1	-5.2	-17%
ESOL	22.8	20.5	20.3	20.8	22.2	-0.6	-3%
FARMS	31.1	29.4	26.9	25.2	27.6	-3.5	-11%

**Table E-5: High School Ineligibility Performance Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011
Asian/White	110%	103%	91%	92%	92%
Black/White	414%	429%	382%	438%	428%
Latino/White	483%	469%	466%	521%	530%
Multiracial/White	--	--	--	--	184%
Special Education/All	203%	200%	208%	207%	187%
ESOL/All	153%	146%	156%	166%	166%
FARMS/All	209%	210%	207%	202%	206%

**Table E-6: High School Gap by Race and Ethnicity**

Students	2007	2008	2009	2010	2011	2007-11 Change	
						Point	%
White - Asian	-0.6	-0.2	0.5	0.4	0.4	1.0	-167%
White - Black	-19.8	-19.1	-15.8	-16.2	-16.4	3.4	-17%
White - Latino	-24.1	-21.4	-20.5	-20.2	-21.5	2.6	-11%
All - Special Education	-15.4	-14.0	-14.0	-13.4	-11.7	-3.7	-24%
All - ESOL	-7.9	-6.5	-7.3	-8.3	-8.8	0.9	11%
All - FARMS	-16.2	-15.4	-13.9	-12.7	-14.2	-2.0	-12%

**Appendix F**

**Algebra 1 by Grade 8 with Grade C or Higher**

(% of Students Completing Algebra I with a C or Higher by the End of Grade 8)

Source: MCPS

**Table F-1: Algebra I Completion Rate by Grade 8 with C or Higher by Subgroup**

Students	2010	2011	2012	2010-12 Change	
				Point	%
All Students	63.7	62.8	62.1	-1.6	-3%
White	79.2	79.4	79.1	-0.1	0%
Asian	83.3	81.9	83.1	-0.2	0%
Black	43.8	44.7	44.0	0.2	0%
Latino	44.5	43.3	39.6	-4.9	-11%
Multiracial	72.7	68.1	70.1	-2.6	-4%
Special Education	24.3	20.9	20.1	-4.2	-17%
ESOL	20.7	20.6	22.3	1.6	8%
FARMS	38.6	37.9	35.2	-3.4	-9%

**Table F-2: Performance Ratios for Algebra I by Grade 8 with C or Higher**

Performance Ratios	2010	2011	2012
Asian/White	105%	103%	105%
Black/White	55%	56%	56%
Latino/White	56%	55%	50%
Multiracial/White	92%	86%	89%
Special Education/All	38%	33%	32%
ESOL/All	32%	33%	36%
FARMS/All	61%	60%	57%

**Table F-3: Achievement Gap for Algebra I by Grade 8 with C or Higher**

Students	2010	2011	2012	2010-12 Change	
				Point	%
White – Asian	-4.1	-2.5	-4.0	0.1	2%
White – Black	35.4	34.7	35.1	-0.3	-1%
White – Latino	34.7	36.1	39.5	4.8	14%
White – Multiracial	6.5	11.3	9.0	2.5	38%
All – Special Education	39.4	41.9	42.0	2.6	7%
All – ESOL	43.0	42.2	39.8	-3.2	-7%
All – FARMS	25.1	24.9	26.9	1.8	7%

**Appendix G**  
**AP/IB Performance**

(% of MCPS Graduates earning a 3 or above on an AP exam or 4 or above on IB exam)

Source: MCPS

**Table G-1: AP/IB Performance by Subgroup**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
All Students	47.0	47.4	49.5	51.1	50.3	53.4	6.4	14%
White	58.0	59.6	62.0	64.4	65.4	69.8	11.8	20%
Asian	61.4	62.3	66.8	66.8	67.0	72.0	10.6	17%
Black	19.4	20.5	21.8	23.7	23.2	24.5	5.1	26%
Latino	36.0	33.5	36.1	37.0	38.1	39.6	3.6	10%
Multiracial	--	--	--	--	53.9	58.2	--	--
Special Education	11.7	9.6	14.6	12.3	13.1	16.1	4.4	38%
ESOL	26.9	23.4	29.4	23.9	33.3	29.9	3.0	11%
FARMS	25.5	22.9	24.7	26.4	27.3	26.4	0.9	4%

**Table G-2: AP/IB Performance Ratios by Subgroup**

Performance Ratios	2007	2008	2009	2010	2011	2012
Asian/White	106%	105%	108%	104%	102%	103%
Black/White	33%	34%	35%	37%	35%	35%
Latino/White	62%	56%	58%	57%	58%	57%
Multiracial/White	--	--	--	--	82%	83%
Special Education/All	25%	20%	29%	24%	26%	30%
ESOL/All	57%	49%	59%	47%	66%	56%
FARMS/All	54%	48%	50%	52%	54%	49%

**Table G-3: AP/IB Performance Gap by Subgroup**

Students	2007	2008	2009	2010	2011	2012	2007-12 Change	
							Point	%
White - Asian	-3.4	-2.7	-4.8	-2.4	-1.6	-2.2	1.2	-35%
White - Black	38.6	39.1	40.2	40.7	42.2	45.3	6.7	17%
White - Latino	22.0	26.1	25.9	27.4	27.3	30.2	8.2	37%
All - Special Education	35.3	37.8	34.9	38.8	37.2	37.3	2.0	6%
All - ESOL	20.1	24.0	20.1	27.2	17.0	23.5	3.4	17%
All - FARMS	21.5	24.5	24.8	24.7	23.0	27.0	5.5	26%

**Appendix H**  
**SAT/ACT Performance**

(% of graduates earning either a 1,650 or above on the SAT or a 24 or higher on the ACT)

Source: MCPS

**Table H-1: SAT/ACT Participation Rates and Performance among Test Takers by Subgroup**

Students	SAT/ACT Participation Rates			% Test Takers with 1650 on SAT or 24 on ACT		
	2010	2011	2012	2010	2011	2012
All Students	76.6	77.4	78.2	51.9	50.4	52.7
White	86.4	87.6	88.6	68.7	67.7	70.5
Asian	86.6	88.3	90.5	65.3	64.2	68.1
Black	69.2	72.2	73.8	17.1	17.4	18.5
Latino	54.2	54.6	54.3	25.9	26.6	29.0
Multiracial	84.4	83.3	86.4	55.4	56.5	54.8
Special Education	43.5	46.7	46.1	23.4	25.4	26.2
ESOL	28.2	28.7	35.1	6.7	5.0	10.9
FARMS	56.6	58.3	57.9	14.9	15.7	14.1

**Table H-2: SAT/ACT Performance among Graduates**

Students	2010	2011	2012	2010-12 Change	
				Point	%
All Students	39.8	39.0	41.2	1.4	4%
White	59.4	59.3	62.5	3.1	5%
Asian	56.4	56.7	61.6	5.1	9%
Black	11.9	12.6	13.7	1.8	15%
Latino	14.0	14.5	15.7	1.7	12%
Multiracial	46.8	47.1	47.3	0.6	1%
Special Education	10.2	11.9	12.1	1.9	19%
ESOL	1.9	1.4	3.8	1.9	102%
FARMS	8.4	9.2	8.2	-0.3	-3%

**Table H-3: SAT/ACT Performance Ratios among Graduates**

Students	2010	2011	2012
Asian/White	95%	96%	99%
Black/White	20%	21%	22%
Latino/White	24%	24%	25%
Multiracial/White	79%	79%	76%
Special Education/All	26%	30%	29%
ESOL/All	5%	4%	9%
FARMS/All	21%	23%	20%

**Table H-4: SAT/ACT Performance Gaps among Graduates**

Students	2010	2011	2012	2010-12 Change	
				Point	%
White-Asian	2.8	2.6	0.8	-2.0	-70%
White-Black	47.5	46.7	48.8	1.4	3%
White-Latino	45.3	44.8	46.7	1.4	3%
White-Multiracial	12.6	12.2	15.1	2.5	20%
All-Special Education	29.6	27.1	29.1	-0.4	-1%
All-ESOL	37.9	37.6	37.4	-0.5	-1%
All-FARMS	31.3	29.9	33.0	1.7	6%

**Appendix I**  
**USM/CTE Program Completion**

(% of graduates meeting University of Maryland System (USM) and/or Career and Technology Education (CTE) Program Requirements)

Source: MCPS

**Table I-1: Percent of Graduates Meeting USM or CTE Program Requirements**

Students	2007	2008	2009	2010	2007-10 Change	
					Point	%
All Students	77.5	77.6	70.5	80.8	3.3	4%
White	86.9	87.8	82.6	85.0	-1.9	-2%
Asian	85.8	84.9	78.7	82.6	-3.2	-4%
Black	63.5	62.8	55.8	63.8	0.3	0%
Latino	60.5	61.8	52.4	64.0	3.5	6%
Special Education	51.9	n/a	41.4	48.2	-3.7	-7%
ESOL	41.0	n/a	25.0	44.1	3.1	8%
FARMS	60.7	n/a	47.9	66.9	6.2	10%

**Table I-2: USM/CTE Program Completion Performance Ratios among Graduates**

Performance Ratios	2007	2008	2009	2010
Asian/White	99%	97%	95%	97%
Black/White	73%	72%	68%	75%
Latino/White	70%	70%	63%	75%
Special Ed/All	67%	n/a	59%	60%
ESOL/All	53%	n/a	35%	55%
FARMS/All	78%	n/a	68%	83%

**Table I-3: USM/CTE Program Completion Gaps among Graduates**

Students	2007	2008	2009	2010	2007-10 Change	
					Point	#
White-Asian	1.1	2.9	3.9	2.4	1.3	118%
White-Black	23.4	25.1	26.8	21.2	-2.2	-9%
White-Latino	26.4	26.0	30.2	21.0	-5.4	-20%
All- Special Education	25.6	n/a	29.1	32.6	7.0	27%
All -ESOL	36.5	n/a	45.5	36.7	0.2	1%
All-FARMS	16.8	n/a	22.6	13.9	-2.9	-17%



**Appendix J**  
**Graduation Rates**

Source: Maryland Report Card

**Table J-1: High School Graduation Rate by Subgroup (Leaver Rate)**

Student Subgroups	2007	2008	2009	2010	2007-10 Change	
					Point	%
All Students	90.4	89.1	87.4	90.0	-0.4	-0.4%
<b>Graduation Rate by Race/Ethnicity</b>						
White Students	94.0	94.5	93.2	95.3	1.3	1%
Asian Students	95.6	95.5	95.3	96.4	0.8	0.8%
Black Students	87.2	83.9	81.6	85.8	-1.4	-2%
Latino Students	80.6	78.1	77.2	79.3	-1.3	-2%
<b>Graduation Rate by Service Status</b>						
Special Education	88.3	84.4	80.5	81.1	-7.2	-8%
Regular Education	90.5	89.5	88.0	90.9	0.4	0.4%
ESOL	89.6	89.8	78.6	70.7	-18.9	-21%
English Proficient	90.2	89.1	87.7	90.8	0.6	0.7%
FARMS	88.6	85.6	81.4	84.0	-4.6	-5%
Non-FARMS	90.6	89.7	88.7	91.6	1.0	1%

**Table J-2: Performance Ratios for Graduation (Leaver Rate) by Subgroups**

Performance Ratios	2007	2008	2009	2010
Asian/White	102%	101%	102%	101%
Black/White	93%	89%	88%	90%
Latino/White	86%	83%	83%	83%
Special Ed/Regular Ed	98%	94%	91%	89%
ESOL/English Proficient	99%	101%	90%	78%
FARMS/Non-FARMS	98%	95%	92%	92%

**Table J-3: High School Graduation Achievement Gap (Leaver Rate)**

Students	2007	2008	2009	2010	2007-10 Change	
					Point	%
White - Asian	-1.6	-1.0	-2.1	-1.1	0.5	-31%
White - Black	6.8	10.6	11.6	9.5	2.7	40%
White - Latino	13.4	16.4	16.0	16.0	2.6	19%
Regular Ed - Special Ed	2.2	5.1	7.5	9.8	7.6	345%
ESOL – English Proficient	0.6	-0.7	9.1	20.1	19.5	3250%
Non-FARMS- FARMS	2.0	4.1	7.3	7.6	5.6	280%

**Table J-4: High School Graduation Rates by Subgroup (Four Year Cohort On-Time Rate)**

Student Subgroups	2010	2011	2012	2010-2012 Change	
				Point	%
All Students	85.1	86.2	87.4	1.3	1%
<b>Graduation Rate by Race/Ethnicity</b>					
White	93.7	93.9	94.0	0.3	0%
Asian	94.7	94.3	95.0	0.3	0%
Black	78.1	81.3	82.3	4.2	5%
Latino	74.2	75.3	76.7	2.4	3%
Multiracial	92.0	92.3	90.8	-1.5	-2%
<b>Graduation Rate by Service Group</b>					
Special Education	59.5	62.5	62.8	3.3	6%
Regular Education	89.4	89.9	90.3	0.9	1%
ESOL	52.3	49.2	53.1	0.8	1%
English Proficient	87.6	88.3	89.3	1.7	2%
FARMS	73.4	75.2	76.6	3.2	4%
Non-FARMS	89.6	90.2	90.9	1.2	1%

**Table J-6: Performance Ratios for Graduation by Subgroups**  
(Four Year Cohort On-Time Rate)

Performance Ratios	2010	2011	2012
Asian/White	101%	100%	101%
Black/White	83%	87%	87%
Latino/White	79%	80%	82%
Multiracial/White	98%	98%	97%
Special Ed/Regular Ed	67%	70%	70%
ESOL/English Proficient	60%	56%	59%
FARMS/Non-FARMS	82%	83%	84%

**Table J-5: High School Graduation Achievement Gap**  
(Four Year Cohort On-Time Rate)

Students	2010	2011	2012	2010-2012 Change	
				Point	%
White - Asian	-1.0	-0.4	-1.0	0.1	-7%
White - Black	15.6	12.6	11.8	-3.8	-25%
White - Latino	19.5	18.6	17.4	-2.1	-11%
Regular Ed - Special Ed	29.9	27.4	27.6	-2.4	-8%
English Proficient - ESOL	35.3	39.1	36.2	0.9	2%
Non-FARMS - FARMS	16.2	15.0	14.3	-1.9	-12%

**Appendix K**  
**Dropout Rates**

Source: Maryland Report Card

**Table K-1: Annual Dropout Rate by Subgroup**

Student Subgroups	2007	2008	2009	2010	2007-10 Change	
					Point	%
All Students	2.7	2.9	2.7	2.0	-0.7	-26%
<b>Dropout Rate by Race/Ethnicity</b>						
White Students	1.5	1.4	1.3	1.0	-0.5	-33%
Asian Students	1.0	1.1	1.0	0.7	-0.3	-30%
Black Students	3.6	3.9	3.8	2.8	-0.8	-22%
Latino Students	5.3	5.8	5.2	3.7	-1.6	-30%
<b>Dropout Rate by Service Group</b>						
Special Education	2.7	3.2	3.8	3.0	0.3	11%
Regular Education	2.7	2.8	2.6	1.8	-0.9	-32%
ESOL	4.9	4.0	5.9	5.0	0.1	2%
English Proficient	2.8	2.8	2.5	1.8	-1.0	-37%
FARMS	3.0	4.0	4.5	3.0	0.0	0%
Non-FARMS	2.6	2.6	2.2	1.6	-1.0	-38%

**Table K-2: Annual Dropout Achievement Gap (Annual Rate)**

Difference by Student Group	2007	2008	2009	2010	2007-10 Change	
					Point	%
White - Asian	-0.5	-0.3	-0.3	-0.3	-0.2	-40%
White - Black	2.1	2.5	2.5	1.8	0.3	-14%
White - Latino	3.8	4.4	3.9	2.7	1.1	-29%
Regular Ed - Special Ed	0.0	0.4	1.3	1.2	1.2	11700%
English Proficient - ESOL	2.1	1.2	3.4	3.2	1.1	55%
Non-FARMS- FARMS	0.4	1.4	2.3	1.4	1.0	278%

**Table K-3: Performance Ratios for Dropouts (Annual Rate) by Subgroups**

Performance Ratios	2007	2008	2009	2010
Asian/White	67%	79%	77%	70%
Black/White	240%	279%	292%	280%
Latino/White	353%	414%	400%	370%
Special Ed/Regular Ed	100%	113%	149%	163%
ESOL/English Proficient	173%	143%	235%	279%
FARMS/Non-FARMS	114%	154%	204%	183%

**Table K-4: Four Year Cohort Dropout Rates by Subgroup**

Student Subgroups	2010*	2011*	2012*	2010-12 Change	
				Point	%
All Students	7.4	7.4	6.8	-0.5	-7%
<b>Dropout Rate by Race/Ethnicity</b>					
White Students	3.5	3.5	3.1	-0.4	-11%
Asian Students	3.0	2.6	3.0	0.0	0%
Black Students	11.2	10.0	9.4	-1.8	-16%
Latino Students	14.3	14.7	13.9	-0.4	-3%
Multiracial Races	3.0	3.6	3.5	0.5	15%
<b>Dropout Rate by Service Group</b>					
Special Education	12.0	13.3	11.6	-0.4	-4%
Regular Education	6.7	6.8	6.3	-0.5	-8%
ESOL	25.4	30.4	26.2	0.8	3%
English Proficient	6.5	6.6	5.8	-0.8	-12%
FARMS	12.5	12.3	11.1	-1.3	-11%
Non-FARMS	5.9	6.0	5.4	-0.5	-9%
Scores below 3% not reported due to federal privacy regulations. For analysis 3% used.					

**Table K-5: Performance Ratios for Four Year Cohort Dropout Rates by Subgroups**

Performance Ratios	2010	2011	2012
Asian/White	86%	74%	97%
Black/White	321%	287%	303%
Latino/White	411%	420%	449%
Multiracial/White	86%	102%	112%
Special Ed/Regular Ed	180%	196%	185%
ESOL/English Proficient	393%	464%	455%
FARMS/Non-FARMS	210%	207%	205%

**Table K-6: Four Year Cohort Dropout Achievement Gap**

Students	2010	2011	2012	2010-11 Change	
				Point	%
White - Asian	0.5	0.9	0.1	-0.4	-81%
White - Black	7.7	6.5	-6.3	1.4	-18%
White - Latino	10.8	11.2	-10.8	0.0	0%
Regular Ed - Special Ed	5.3	6.5	-5.3	-0.1	2%
English Proficient - ESOL	19.0	23.9	-20.4	-1.6	8%
Non-FARMS - FARMS	6.5	6.4	-5.7	0.8	-12%

**Appendix L**

**Maryland's Annual Measurable Objectives under the ESEA Waiver**

Source: MSDE ESEA Waiver Application, 2012 (see pages 71 and 79)

**Table L-1: MSDE Annual Measurable Objectives for Reading and Mathematics Proficiency, 2011-17**

Subgroup	2011 Baseline	2012	2013	2014	2014	2016	2017
<b>Reading Proficiency Goals</b>							
All Students*	80.7	82.3	83.9	85.5	87.1	88.7	90.3
Native American	78.9	80.7	82.4	84.2	86.0	87.7	89.5
Asian	94.5	94.9	95.4	95.8	96.3	96.8	97.2
Black	67.7	70.4	73.1	75.8	78.5	81.2	83.9
Latino	76.5	78.5	80.4	82.4	84.3	86.3	88.3
Pacific Islander	80.0	81.7	83.3	85.0	86.7	88.3	90.0
White	90.1	90.9	91.7	92.5	93.4	94.2	95.0
Multiracial	86.3	87.5	88.6	89.8	90.9	92.0	93.2
Special Education	56.5	60.2	63.8	67.4	71.0	74.7	78.3
ESOL	74.0	76.1	78.3	80.5	82.7	84.8	87.0
FARMS	69.3	71.9	74.4	77.0	79.6	82.1	84.7
<b>Mathematics Proficiency Goals</b>							
All Students	85.1	86.4	87.6	88.8	90.1	91.3	92.6
Native American	82.6	84.0	85.5	86.9	88.4	89.8	91.3
Asian	93.9	94.4	94.9	95.4	95.9	96.4	96.9
Black	75.6	77.6	79.6	81.7	83.7	85.7	87.8
Latino	82.0	83.5	85.0	86.5	88.0	89.5	91.0
Pacific Islander	84.8	86.1	87.4	88.6	89.9	91.2	92.4
White	92.1	92.8	93.4	94.1	94.8	95.4	96.1
Multiracial	90.5	91.3	92.1	92.9	93.7	94.5	95.3
Special Education	63.7	66.8	69.8	72.8	75.8	78.8	81.9
ESOL	75.1	77.2	79.3	81.4	83.4	85.5	87.6
FARMS	75.6	77.7	79.7	81.7	83.8	85.8	87.8
* 2011 data reflects the percentage of students by subgroup demonstrating proficiency in reading on the MSA; 2012 through 2017 data reflects the AMO goals by subgroup that so that by 2017, 90.3% of all students will demonstrate reading proficiency, but by subgroup, 78.3% of students with disabilities will meet this benchmark compared to 97% of Asian students.							

**Table L-2: MSDE Annual Measurable Objectives for 4-Year Cohort Graduation Rate, 2011-20**

Subgroup	2011 Baseline	2012	2013	2014	2014	2016	2017	2018	2019	2020
All Students*	82.85	83.53	84.20	84.88	85.55	86.23	86.90	87.58	88.25	88.93
Native American	74.10	75.26	76.42	77.58	78.74	79.91	81.07	82.23	83.39	84.55
Asian	93.13	93.23	93.34	93.44	93.55	93.65	93.75	93.86	93.96	94.07
Black	76.14	77.19	78.24	79.28	80.33	81.38	82.43	83.47	84.52	85.57
Latino	71.82	73.11	74.40	75.68	76.97	78.26	79.55	80.83	82.12	83.41
Pacific Islander	88.46	88.82	89.19	89.55	89.91	90.28	90.64	91.00	91.37	91.73
White	89.11	89.44	89.76	90.09	90.42	90.75	91.07	91.40	91.73	92.06
Multiracial	91.17	91.38	91.60	91.81	92.02	92.23	92.45	92.66	92.87	93.09
Special Education	55.66	57.85	60.03	62.22	64.40	66.59	68.77	70.96	73.14	75.33
ESOL	73.72	55.41	57.74	60.07	62.40	64.72	67.05	69.38	71.71	74.04
FARMS	73.72	74.90	76.08	77.27	78.45	79.63	80.81	82.00	83.18	84.36
* 2011 data reflects the four year cohort graduation rate for each subgroup and 2012 through 2017 data reflects the AMO goals by subgroup.										

**Table L-3: MSDE Annual Measurable Objectives for 5-Year Cohort Graduation Rate, 2011-20**

Subgroup	2011 Baseline	2012	2013	2014	2014	2016	2017	2018	2019	2020
All Students*	84.57	85.15	85.73	86.31	86.89	87.47	88.05	88.63	89.21	89.79
Native American	78.01	78.95	79.90	80.84	81.79	82.73	83.67	84.62	85.56	86.51
Asian	94.53	94.56	94.58	94.61	94.63	94.66	94.69	94.71	94.74	94.77
Black	77.86	78.81	79.76	80.72	81.67	82.62	83.57	84.53	85.48	86.43
Latino	78.15	79.09	80.02	80.96	81.89	82.83	83.77	84.70	85.64	86.58
Pacific Islander	95.12	95.11	95.11	95.10	95.09	95.09	95.08	95.07	95.07	95.06
White	89.65	89.95	90.24	90.54	90.84	91.14	91.43	91.73	92.03	92.33
Multiracial	94.73	94.75	94.76	94.78	94.79	94.81	94.82	94.84	94.85	94.87
Special Education	60.94	62.83	64.72	66.62	68.51	70.40	72.29	74.19	76.08	77.97
ESOL	66.64	68.22	69.79	71.37	72.94	74.52	76.09	77.67	79.24	80.82
FARMS	80.24	81.06	81.88	82.70	83.62	84.34	85.16	85.98	86.80	87.62
* 2011 data reflects the five year cohort graduation rate for each subgroup and 2012 through 2017 data reflects the AMO goals by subgroup.										